13454

CA-325A/325AP

SPECIFICATIONS

Connector

Inputs

AC IN (3-pin male)

GENLOCK (BNC)
- VBS (composite video): 1.0 Vp-p, 75 ohms, unbalanced, sync negative
- BB (black burst): sync 0.3 Vp-p, burst 0.3 Vp-p, 75 ohms, unbalanced, sync negative

Outputs

AUDIO OUTPUT (phono jack)
- −10 dBs (47 k-ohm load), unbalanced

R, G, B (BNC)
- 0.7 Vp-p, 75 ohms, unbalanced, SYNC (negative) ON GREEN switchable

S VIDEO OUTPUT (Mini DIN 4-pin)
- Y: 1.0 Vp-p, 75 ohms, unbalanced, sync negative
- C: burst 0.286 Vp-p, 75 ohms, unbalanced

SYNC OUT (BNC)
- 4.0 Vp-p, 75 ohms, negative

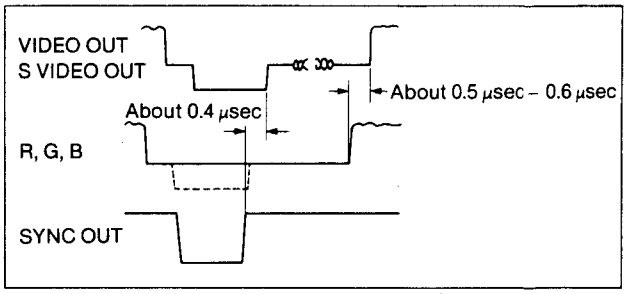
VIDEO OUTPUT (BNC)
- 1.0 Vp-p, 75 ohms, unbalanced, sync negative

Remote

REMOTE (10-pin female)

Phase of output signals

When the adaptor is attached to the DXC-325/325P video camera



Note that the phase may shift depending on the model of the video camera.

General

Power requirements
- CA-325A: 120 V, 50 Hz/60Hz
- CA-325AP: 220/240 V, 50 Hz/60 Hz

Power consumption
- CA-325A: 48 W, CA-325AP: 44 W

Operating temperature
- −5°C to +45°C (23°F to 113°F)

Storage temperature
- −20°C to +60°C (−4°F to 140°F)

Weight: Approx. 1.3 kg (2 lb 14 oz)

Dimensions: Approx. 109 × 164 × 138 mm (w/h/d) ($4^3/_8 \times 6^1/_2 \times 5^1/_2$ inches)

Supplied accessories
- Screws: M4 × 6 (2), M4 × 12 (2)
- AC power cord (1)
- Plug holder (1)

SONY®

SERVICE MANUAL

SAFETY RELATED COMPONENT WARNING

Components identified by shading and ⚠ marked on the schematic diagrams and parts list are critical to safe operation. Replace these components with SONY parts whose part numbers appear as shown in this manual or in supplements published by SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set.

Check the metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

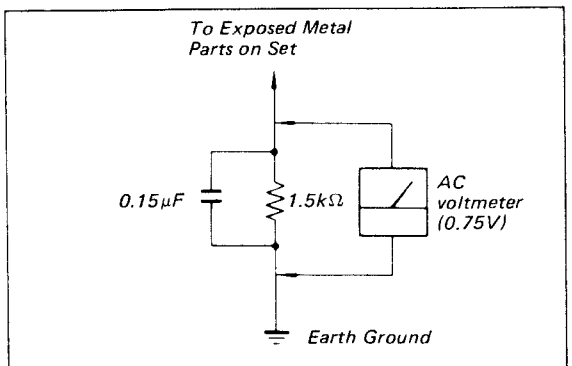


Fig. A. Using an AC voltmeter to check AC leakage.

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SECTION 1
GENERAL DESCRIPTION

Overview

The CA-325A/325AP camera adaptor is to be attached to a color video camera head having the 50-pin DIN connector (ex. DXC-325/325P video camera head).
By attaching the adaptor to the video camara head, the RGB signal output (BNC connector) and the following functions are available.
Therefore, the video camera head with this adaptor attached can be used for industrial, computer graphics, and other applications in addittion to the standalone use.

Three different signal outputs;
RGB, Y/C, and composite video

One audio signal output (monaural)

Genlock function

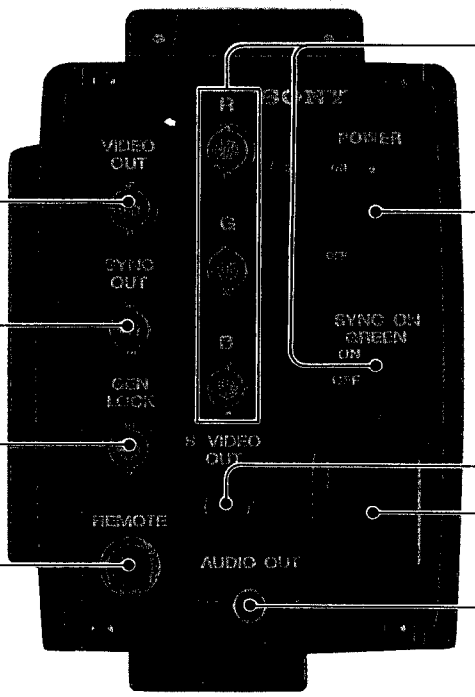
Remote control function
Possible to connect an RM-M7G remote control unit.
(Some functions of the RM-M7G are disabled.)

Precautions

Operation
- Do not use the unit in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Allow adequate air circulation to prevent internal heat build-up.
- Do not expose the unit to the extremely high temperature and humidity.

Cleaning
Clean the cabinet, panel and controls with a dry soft cloth, or soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine, which might damage the finish.

Functions of Parts



RGB component video output
(When the SYNC ON GREEN switch is set to ON, sync signal is added to the G signal.)

Composite video output

Main power switch

Composite sync output

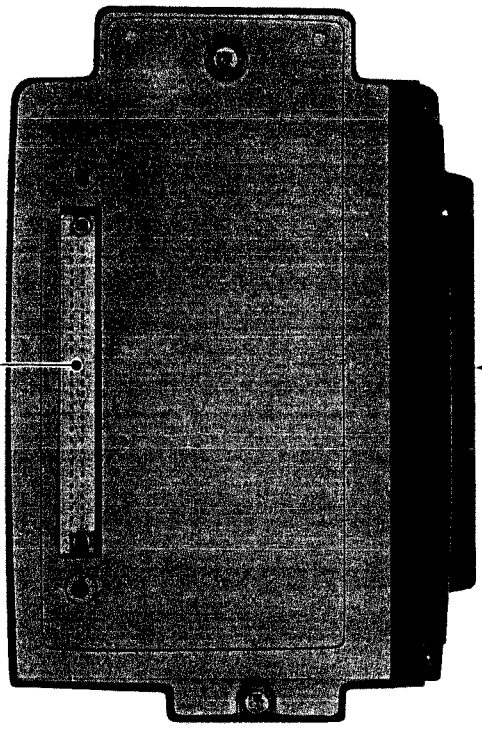
External sync input
(composite video or black burst signal)

Y/C separate video output

For connecting an AC power cord.

For connecting an RM-M7G.

Monaural audio output



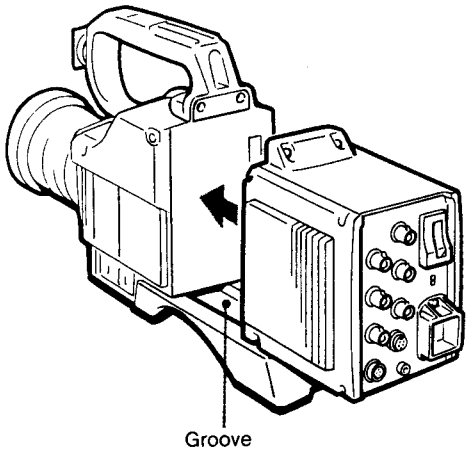
50-pin connector (female)
For connecting the 50-pin connector (male) of the video camera head

Note that the heat sink becomes hotter as the more current flows.
(Supply current:
Maximum 2.5 A at 12 V DC)

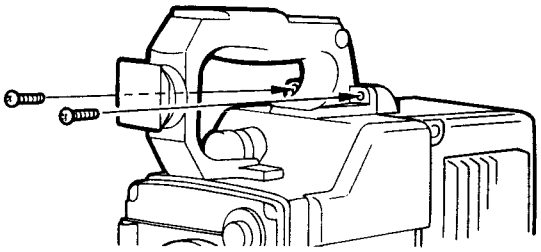
Connections

To attach the CA-325A/325AP to the DXC-325/325P video camera

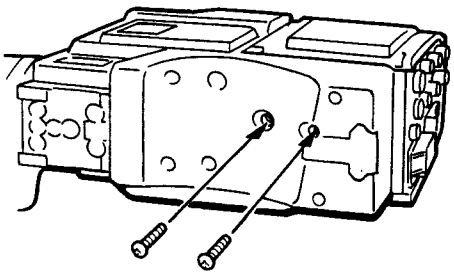
1 **Push the camera adaptor forward along the groove.**



2 **Fix the camera adaptor with the supplied screws M4 × 12.**

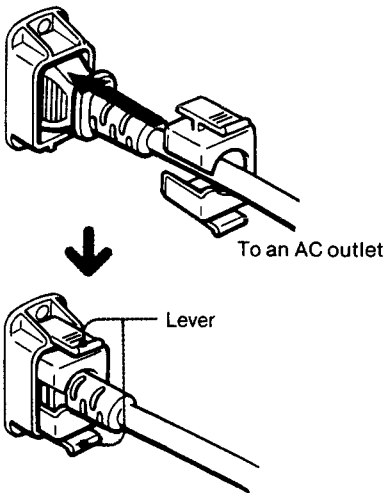


3 **Fix the camera adaptor with the supplied screws M4 × 6.**



Power

Insert the supplied AC power cord into the AC IN socket on the adaptor, and fix the plug with the supplied plug holder.

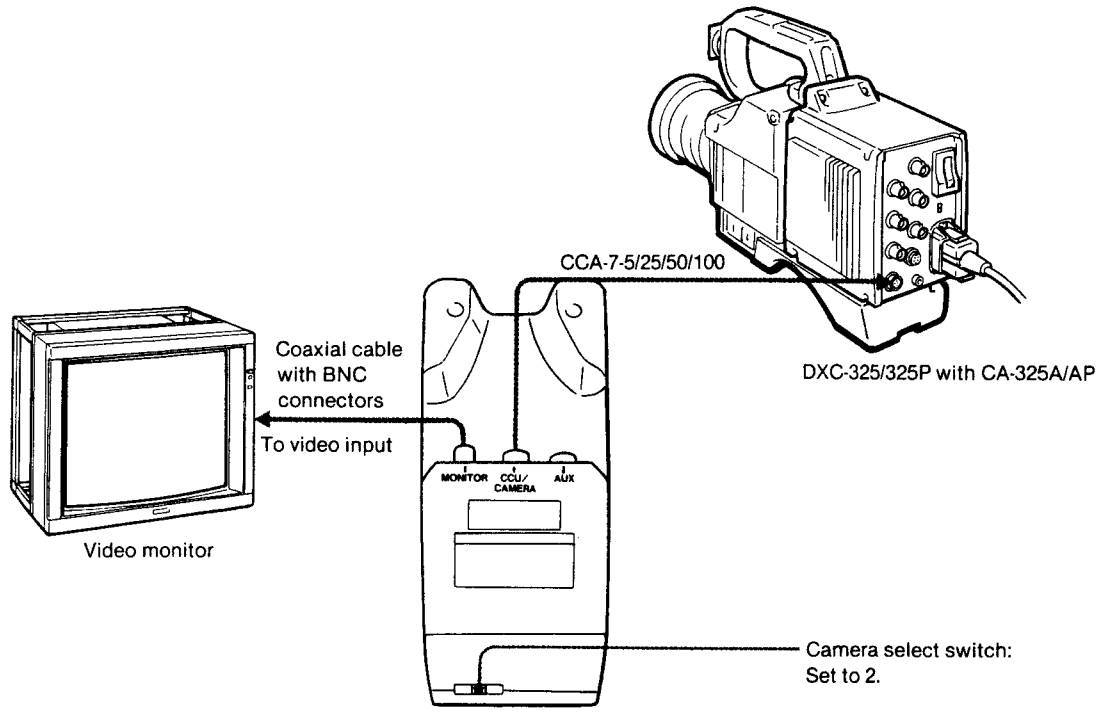


Pull the holder to detach, while holding down the levers.

Remote Control Using an RM-M7G

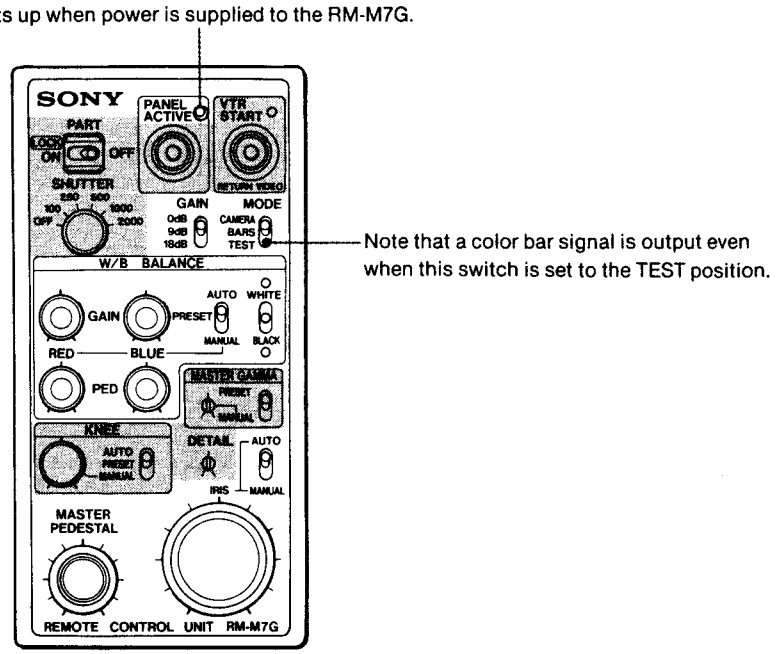
(When the adaptor is attached to the DXC-325/325P video camera head)

Connections and setting of the camera select switch



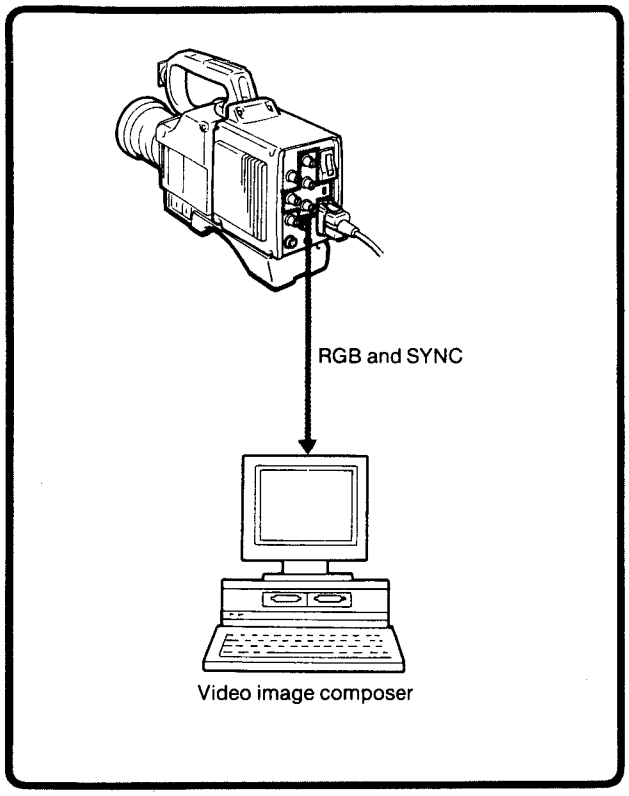
Operation

- ■ : These switches and controls do not function.
- See the RM-M7G's Operating Instructions to use the RM-M7G.

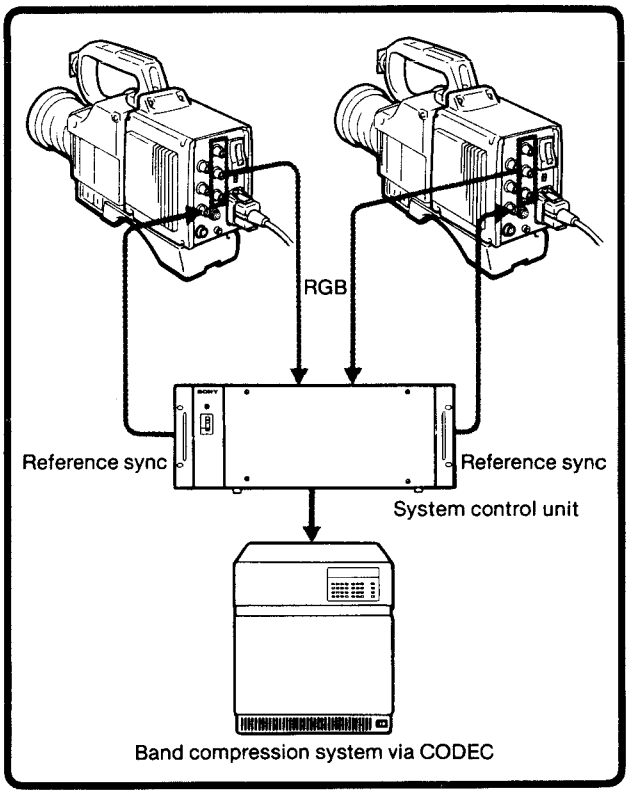


System Examples

CG (Computer Graphics) system

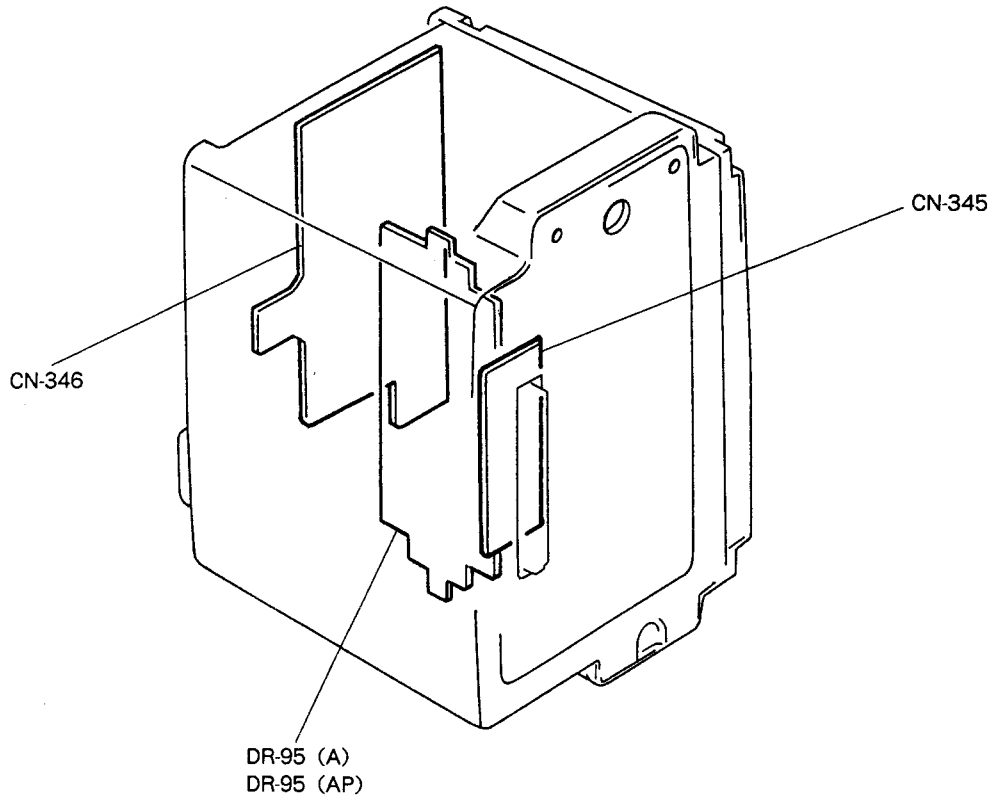


Teleconference system



SECTION 2
SERVICE INFORMATION

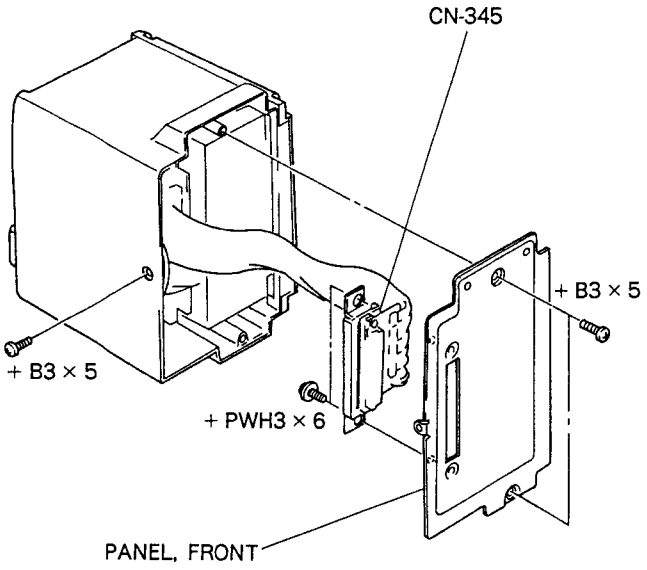
2-1. BOARD LAYOUT



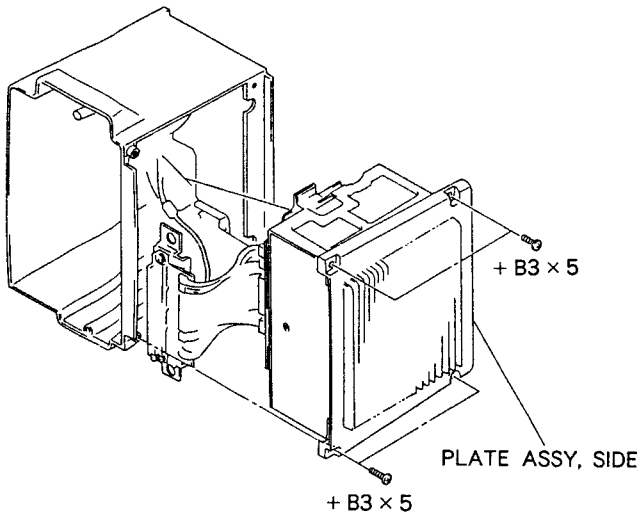
2-2. REPLACEMENT OF MAIN PARTS

2-2-1. Removal of DR-95 (A) / (AP) Board

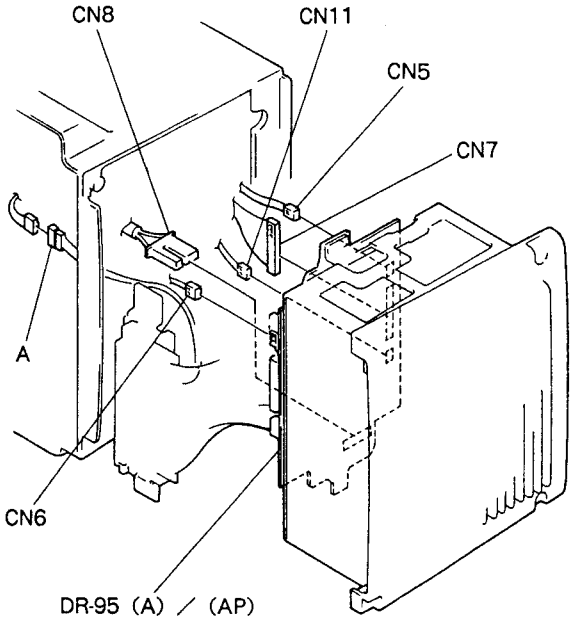
1. Remove three screws (+ B3 × 5) and remove the front panel. Remove two screws (+ PWH3 × 6) and remove the CN-345 board from the front panel.



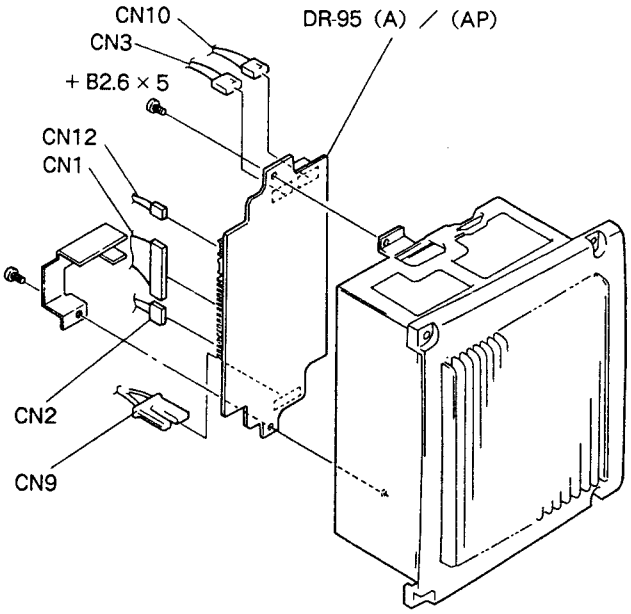
2. Remove four screws (+ B3 × 5) and pull out the side plate ASSY.



3. Disconnect the five connectors, CN5, CN6, CN7, CN8 and CN11 on the DR-95 (A) / (AP) board. Disconnect the connector A shown in the figure.



4. Disconnect the six connectors, CN1, CN2, CN3, CN9, CN10 and CN12 on the DR-95 (A) / (AP) board. Remove two screws (+ B2.6 × 5) and remove the DR-95 (A) / (AP) board.

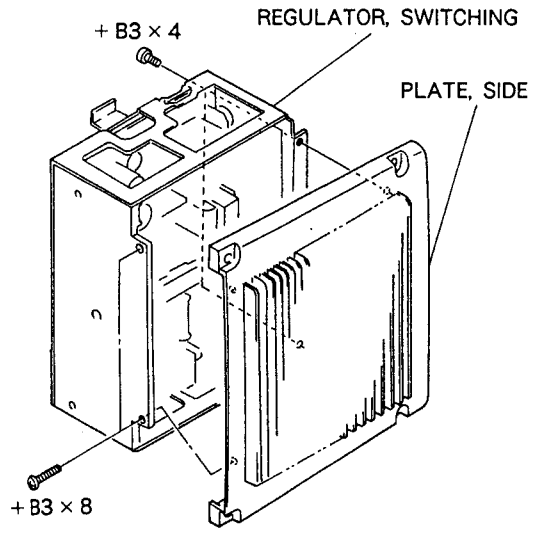


5. When installing the DR-95 (A) / (AP) board, reverse the procedures for removal.

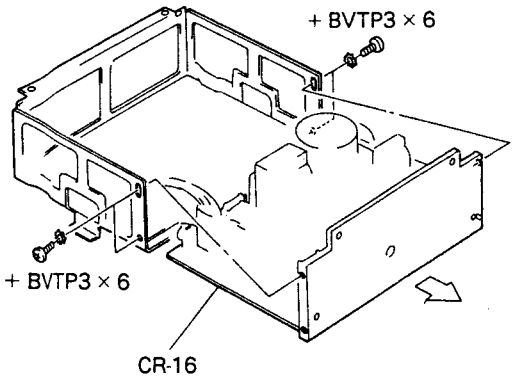
2-2-2. Removal of Switching Regulator

1. Remove the side plate ASSY, referring to Section 2-2-1 "Removal of DR-95 (A) / (AP) Board", Procedures 1 to 4.

2. Remove two screws (+ B3 × 4) and two screws (+ B3 × 8). The switching regulator will be removed from the side plate.



3. When replacing any of electrical parts in the switching regulator, remove four screws (+ BVTP3 × 6) and pull out the CR-16 board in the direction of the arrow.

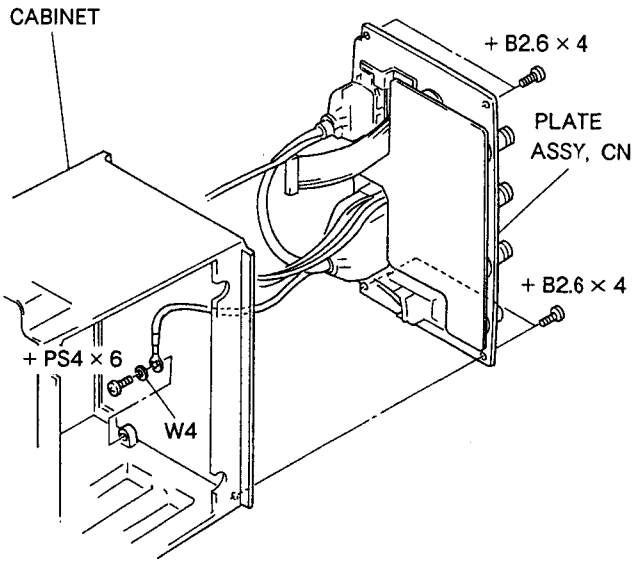


4. When installing the switching regulator, reverse the procedures for removal.

2-2-3. Removal of CN Plate ASSY

1. Remove the side plate ASSY, referring to Section 2-2-1 "Removal of DR-95 (A) / (AP) Board", Procedures 1 to 3.

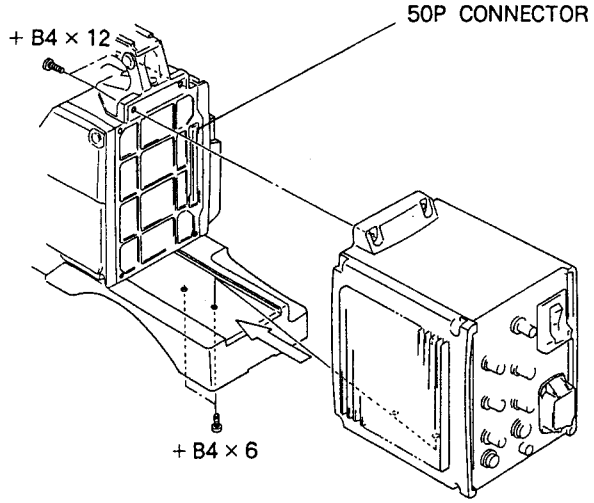
2. Remove four screws (+ B2.6 × 4) and remove the screw (+ PS4 × 6) and washer (W4) shown in the figure. The CN plate ASSY will be removed.



3. When installing the CN plate ASSY, reverse the procedures for removal.

2-2-4. Attaching the CA-325A/AP to the DXC-325/325P

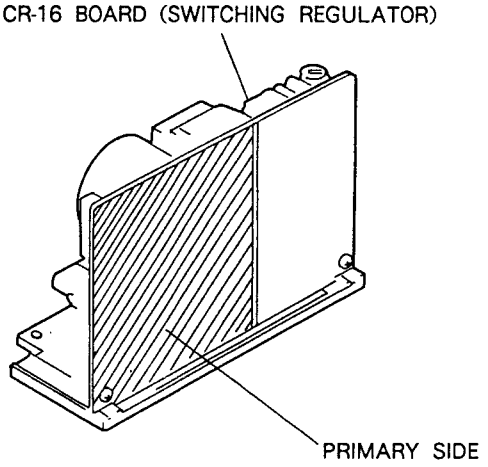
1. Slide the CA-325A/AP along the shoe and connect the 50P connector.
   Fix the CA-325A/AP to the camera with two screws (+ B4 × 6) and two screws (+ B4 × 12).



2. When detaching the CA-325A/AP, move it straight backward with care so that you do not damage the pins of the 50P connector. Detach the CA-325A/AP with reversed procedures for attachment.

2-3. NOTE ON HANDLING THE SWITCHING REGULATOR

(1) The power supply unit of the CA-325A/AP consists of one switching regulator. A considerable portion of the power circuit is on the primary side, so take precaution to prevent electric shock.



(2) Since the capacitor remains charged for a while after the power is switched off, take precautions to prevent electric shock for a few minutes, even after the power is switched off.

(3) Running the power supply unit under no load may cause power source trouble, so never check the power supply unit independently.

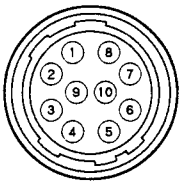
2-4. CONNECTORS AND CABLES

2-4-1. Connector Input/Output signals

The main connector input/output signals are as follows :

VIDEO OUT ; 1.0 Vp-p ± 0.1V, sync negative 75 Ω
GENLOCK ; 1.0 Vp-p, sync negative, or black burst
SYNC OUT ; 4.0 Vp-p, 75 Ω
R/B ; 0.7 Vp-p, 75 Ω
G ; ON 1.0 Vp-p, 75 Ω
OFF 0.7 Vp-p, 75 Ω
AUDIO OUT ; − 20 ~ − 10dB UN-BALANCE

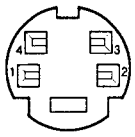
REMOTE (10P, FEMALE)



(EXT VIEW)

No.	SIGNAL	SPECIFICATION
1	PAN CONT OUT	0 to 5V
2	VIDEO (REMOTE) OUT (X)	Zi ≧ 10 k Ω 4.5 ± 0.5 Vdc 0 + 0.5 Vdc
3	VIDEO (REMOTE) OUT (G)	GND for VIDEO
4	TILT CONT OUT	0 to 5V
5	VTR START STOP TRIG IN	Zi ≧ 10 k Ω OPEN (4.5 ± 0.5V) 0 + 0.5V
6	S DATA (REMOTE)	0 to 5V Zi ≧ 10 k Ω
7	ON/OFF CONT OUT	ON : + 5V OFF : 0V
8	REC TALLY IND OUT	Zi ≧ 600 Ω
9	EXT DC OUT (G)	GND for + 12V
10	EXT DC OUT (+ 12V)	10.5 to 17.0 Vdc 3A

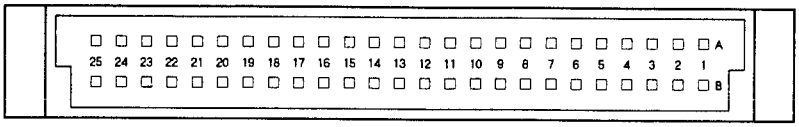
S VIDEO OUT (4P, FEMALE)



(EXT VIEW)

No.	SIGNAL	SPECIFICATION
1	Y OUT (G)	GND for Y
2	CHROMA OUT (G)	GND for CHROMA
3	Y OUT (X)	1.0 Vp-p, 75 Ω
4	CHROMA OUT (X)	0.286 Vp-p, 75 Ω

CAMERA (50P, FEMALE)



(EXT VIEW)

No.	SIGNAL	SPECIFICATION
A1	GND (CHASSIS)	
B1	GND (CHASSIS)	
A2	(SPARE)	No Connection
B2	MIC IN (X)	−60 dBm Zi = 3 kΩ···10 kΩ
A3	MIC IN (G)	
B3	(SPARE)	No Connection
A4	REC TALLY OUT	ON : 4.5 ± 0.5V (CAM OPEN) OFF : GND
B4	(SPARE)	No Connection
A5	VTR START/STOP IN	ON : 0 + 0.5V OFF : OPEN
B5	(SPARE)	No Connection
A6	(SPARE)	
B6	(SPARE)	
A7	(SPARE)	
B7	(SPARE)	
A8	GENLOCK VIDEO OUT (G)	VBS 1.0 Vp-p negative sync BB 0.3 Vp-p sync
B8	GENLOCK VIDEO OUT (X)	
A9	(SPARE)	No Connection
B9	(SPARE)	
A10	PB RET VIDEO OUT (G)	1.0 Vp-p negative sync Zo ≧ 75 Ω ± 0.5 %
B10	PB RET VIDEO OUT (X)	
A11	(SPARE)	No Connection
B11	PLAYBACK/CAMERA CONT PB ID OUT	ON : 0 + 0.5v OFF : OPEN
A12	VBS (CCQ) IN (G)	1.0 Vp-p, negative sync Zi = 75 Ω ± 0.5 %
B12	VBS (CCQ) IN (X)	

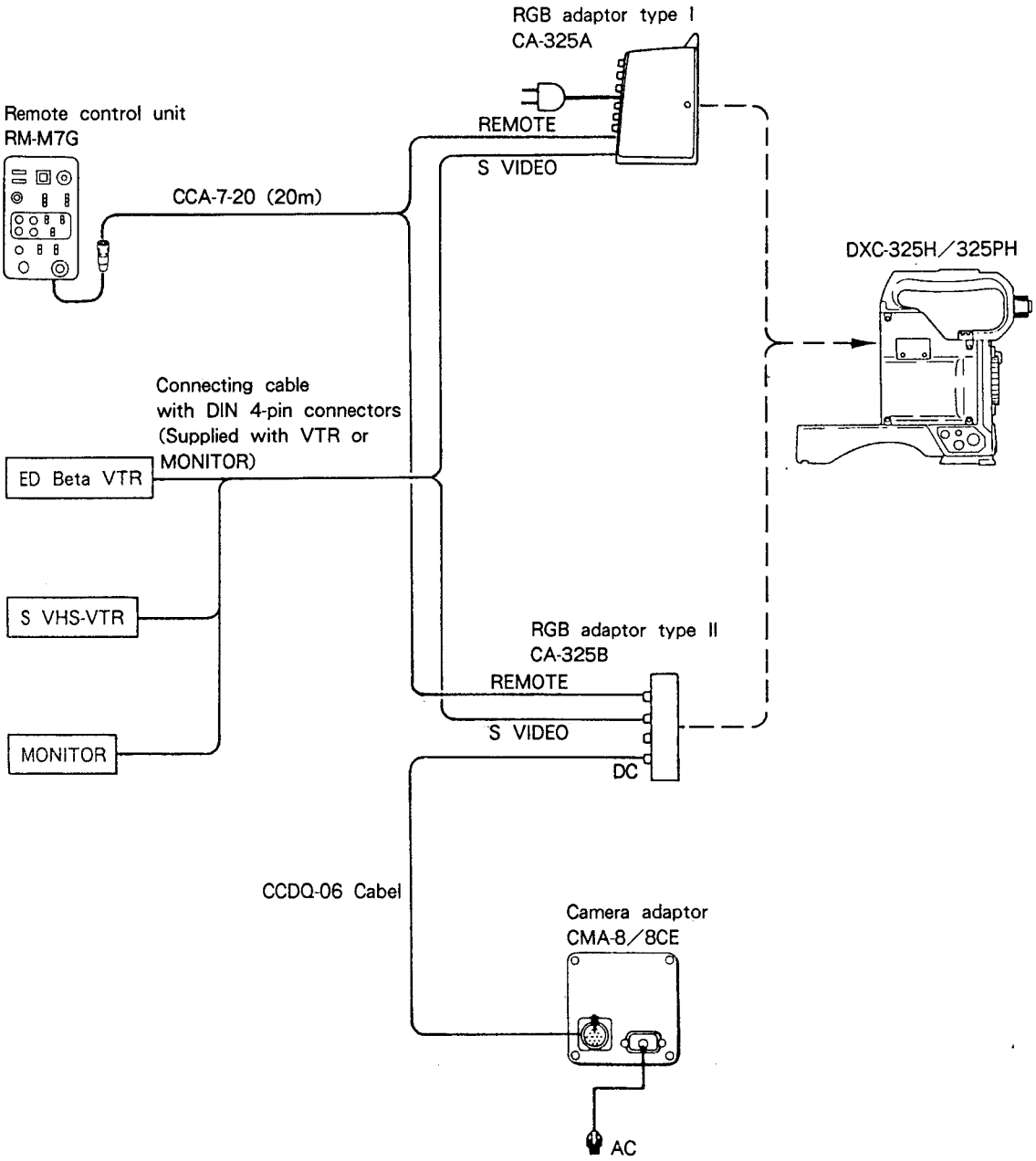
No.	SIGNAL	SPECIFICATION
A13	(SPARE)	No Connection
B13	VTR CCU CONT IN	VTR : GND, CCU : 4.5V
A14	CHROMINANCE IN (G)	0.286 Vp-p Zi = 1 kΩ ± 0.5 %
B14	CHROMINANCE IN (X)	
A15	LUMINANCE IN (G)	1.0 Vp-p, negative sync Zi = 1 kΩ ± 0.5 %
B15	LUMINANCE IN (X)	
A16	PR VIDEO GND IN	GND for PR VIDEO
B16	R PR VIDEO IN	1.4 Vp-p, positive Zi ≦ 1 kΩ
A17	G PR VIDEO IN	
B17	B PR VIDEO IN	
A18	BATT ALARM S.DATA	
B18	(SPARE)	No Connection
A19	(SPARE)	
B19	(SPARE)	
A20	+ 8.5V IN	± 0.2V, 100 mA
B20	+ 5V IN	± 0.1V, 50 mA
A21	− 5V IN	± 0.1V, 50 mA
B21	GND	REG, GND
A22	UNREG (+ 12V) IN	MIN 10.6V, 2A MAX 17.0V
B22	UNREG (+ 12V) IN	
A23	UNREG (GND) IN	
B23	UNREG (GND) IN	
A24	(SPARE)	
B24	(SPARE)	
A25	GND (CHASSIS)	CHASSIS GND
B25	GND (CHASSIS)	

2-4-2. Connections

When cables with connectors are set to the respective connectors on the connector panel during installation or service, the specified or equivalent connectors with cables, or the specified cable assemblies should be used, these are listed as follows ;

Connector function	Parts No. and name of connector with cable
VIDEO OUT GENLOCK SYNC OUT R/G/B (BNC)	1-508-898-00 PULG, BNC or UGC (B-B) COAXIAL Cable assembly (optional) UGC-0.5 (0.5m/1.6 feet) UGC-1 (1m/3.2 feet) UGC-2 (2m/6.4 feet) UGC-5 (5m/16.4 feet) UGC-10 (10m/32.8 feet) UGC-25 (25m/82 feet)
REMOTE (10P, FEMALE)	1-506-522-11 PLUG, CONNECTOR, ROUND 10P, MALE HIROSE HR10A-10P-10P equality or CCA-7-20 Cable assembly (optional)
S VIDEO OUT (4P, FEMALE)	1-555-243-00 CABLE, CONNECTOR, 4P HOSHIDENSEI TCS 8540 equality
CAMERA (50P, FEMALE)	1-566-579-11 MULTI, 50P MALE

2-5. SYSTEM CONFIGURATION



SECTION3
ALIGNMENT

3-1. PREPARATION

3-1-1. Equipment Required

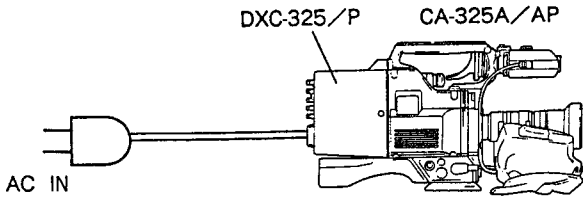
- Oscilloscope (probe × 2)
- Power cord
- Video camera DXC-325/P

Note : Be sure to use a completely adjusted camera for correct adjustment.

- Digital volt-meter

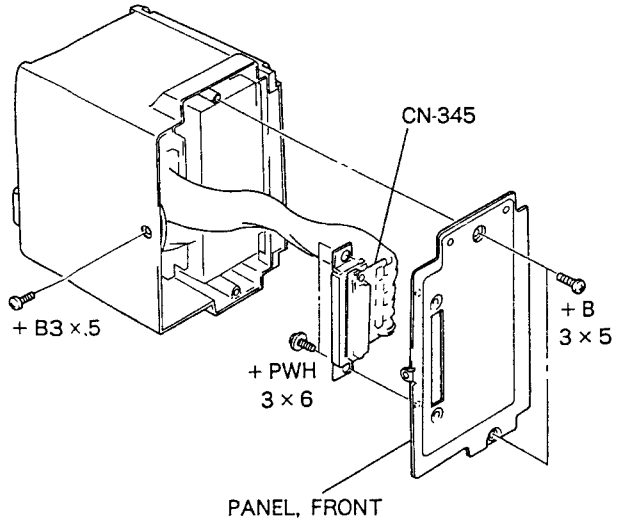
3-1-2. Connections

Set the camera as follows.

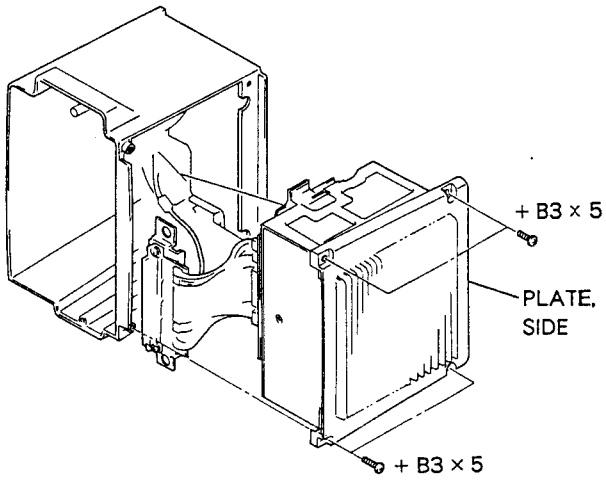


Connecting the CA-325A/AP to the camera

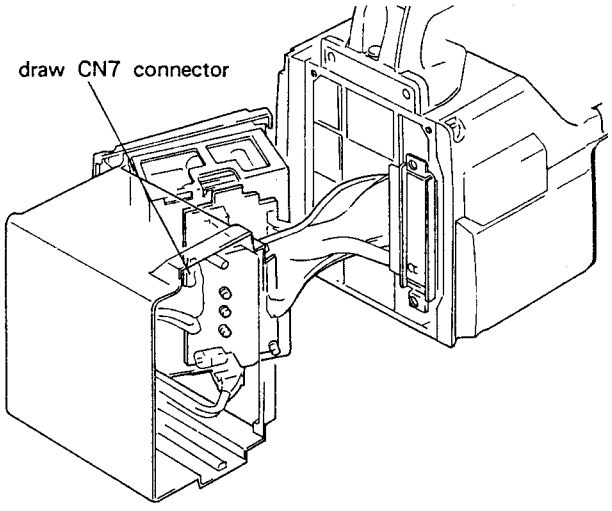
1. Remove the three screws (+ B3 × 5) which fix the front panel to CA-325A/AP.
2. Remove the front panel.
3. Remove the two screws (+ PWH3 × 6) which fix the floating board.



4. Remove the four screws (+ B3 × 5) which fix the side plate ASSY.
5. Pull out the side plate ASSY from the cabinet.
   Note : This time, do not pull it forcibly, because the harness may be damaged.

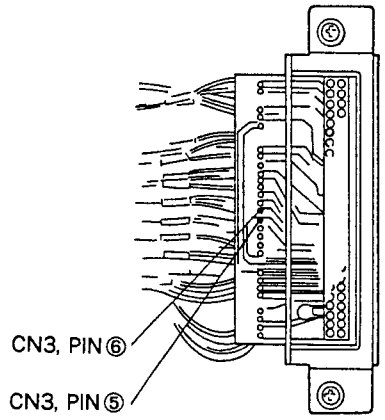


6. Connect 50 pin connector with DXC-325/P.
7. Draw CN7 connector from DR-95 (A) / (AP).

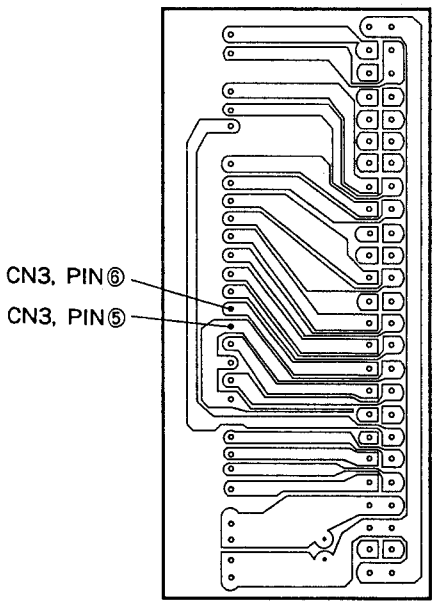


3-1-3. Initial Setting

CAMERA
POWER switch : ON
BARS/WB selector : BARS
CA
SYNC ON GREEN switch :ON
Oscilloscope
Calibrate the probe which is connected with the CH1 and CH2 on the oscilloscope.
Put the oscilloscope at CH2 into the "InV/Add" mode.



CN-345 BOARD (Soldering Side)

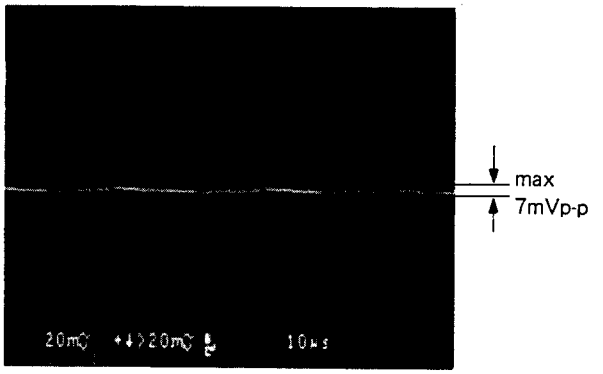


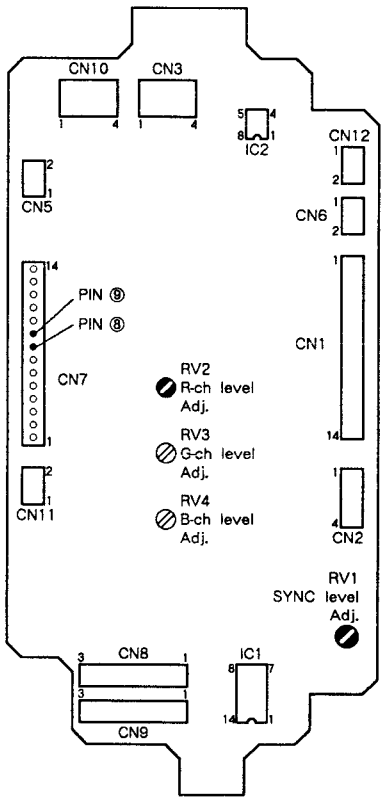
CN-345 BOARD (Soldering Side)

3-2. ADJUSTMENT

3-2-1. R-ch Level Adjustment

Equipment : Oscilloscope
Test Point : CN7 pin⑧
/DR-95 (A) / (AP) board (ch1)
CN7 pin⑨ (GND)
/DR-95 (A) / (AP) board
CN3 pin⑥/CN-345 board (ch2)
CN3 pin⑤ (GND) /CN-345 board
Adj. Point : ◐RV2/DR-95 (A) / (AP) board
Spec. : Confirm the waveform is almost flat. (The level difference shall be 7 mVp-p or less)

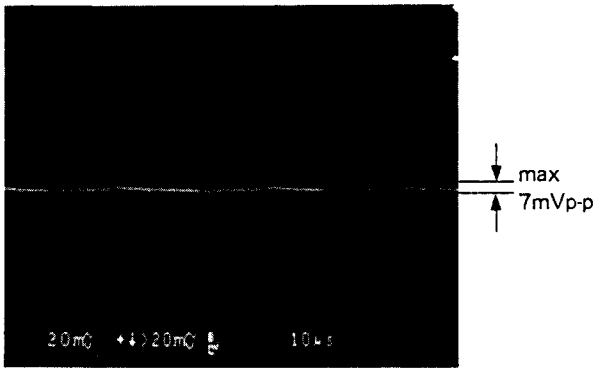


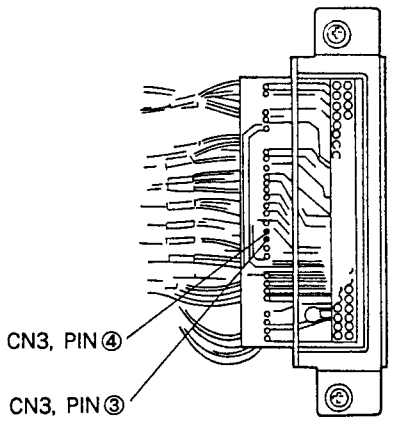


DR-95 (A) / (AP) BOARD (Component Side)

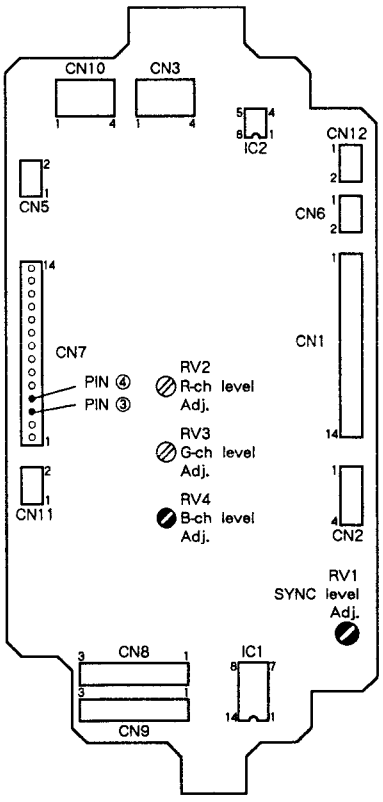
3-2-2. B-ch Level Adjustment

Equipment : Oscilloscope
Test Point : CN7 pin④
/DR-95 (A) / (AP) board (ch1)
CN7 pin③ (GND)
/DR-95 (A) / (AP) board
CN3 pin④/CN-345 board (ch2)
CN3 pin③ (GND) /CN-345 board
Adj. Point : ◐RV4/DR-95 (A) / (AP) board
Spec. : Confirm the waveform is almost flat. (The level difference shall be 7 mVp-p or less)

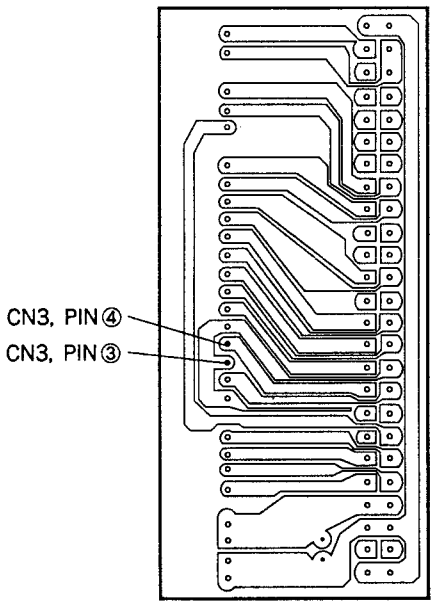




CN-345 BOARD (Soldering Side)



DR-95 (A) / (AP) BOARD (Component Side)

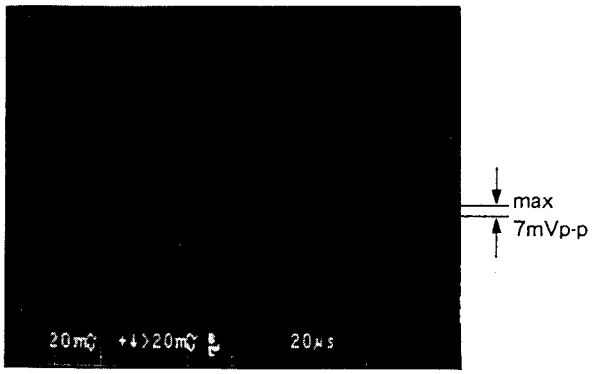


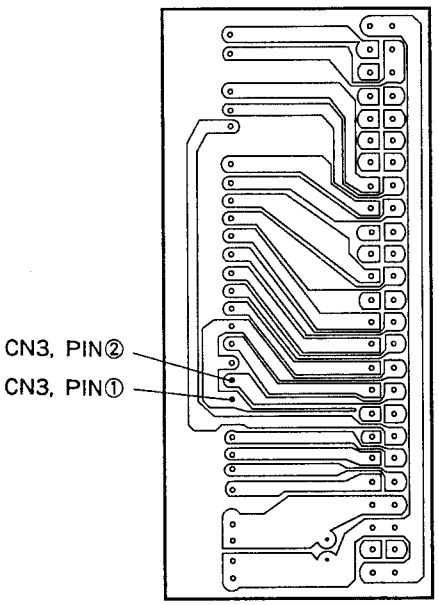
CN-345 BOARD (Soldering Side)

3-2-3. G-ch Level Adjustment

Note : Steps 3-2-4 SYNC LEVEL ADJUSTMENT and this adjustment affect each other, so carry out these adjustment alternately several times until the specification for each step is satisfied.

Equipment : Oscilloscope
Test Point : CN7 pin⑥ /DR-95 (A) / (AP) board (ch1)
CN7 pin⑤ (GND) /DR-95 (A) / (AP) board
CN3 pin②/CN-345 board (ch2)
CN3 pin① (GND) /CN-345 board
Adj. Point : ●RV3/DR-95 (A) / (AP) board
Spec. : Confirm the waveform except the SYNC period is flat.
(The level difference shall be 7 mVp-p or less)



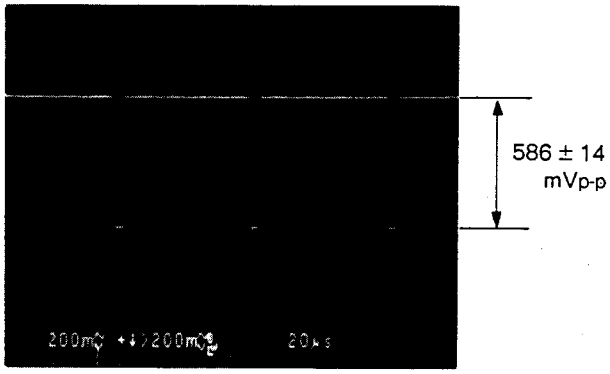


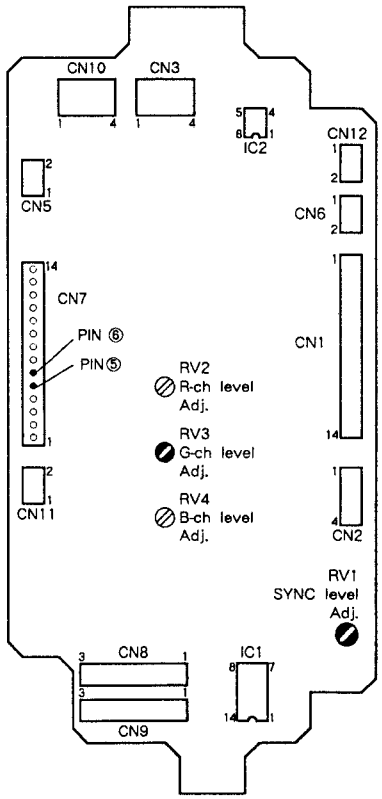
DR-95 (A) / (AP) BOARD (Component Side)

3-2-4. SYNC Level Adjustment

Note : Steps 3-2-3 G-oh LEVEL ADJUSTMENT and this adjustment affect each other, so carry out these adjustment alternately several times unit the specification for each step is satisfied.

Equipment : Oscilloscope
Test Point : CN7 pin⑥/DR-95 (A) / (AP) board
CN7 pin⑤ (GND) /DR-95 (A) / (AP) board
Adj. Point : ●RV1/DR-95 (A) / (AP) board
Spec. : 586 ± 14 mVp-p





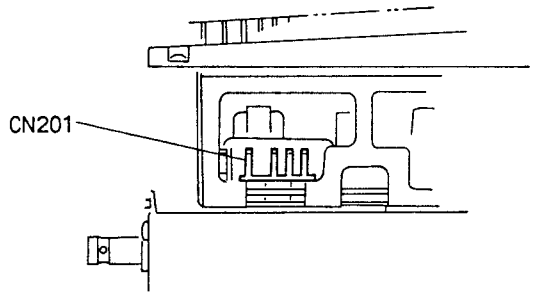
CN345 BOARD (Soldering Side)

3-2-5. DC Level Adjustment

Equipment : Digital volt-meter
Test Point : CN201 pin① or ②/CR-16 board
CN201 pin③ (GND) /CR-16 board
Adj. Point : ◐RV201/CR-16 board
Spec. : 12 ± 0.1 Vdc

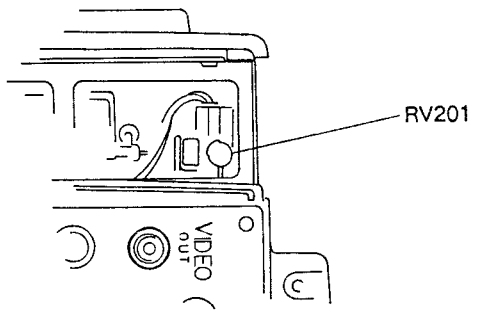
Adjustment Procedures

1. Draw CN201 connector from CR-16 board.



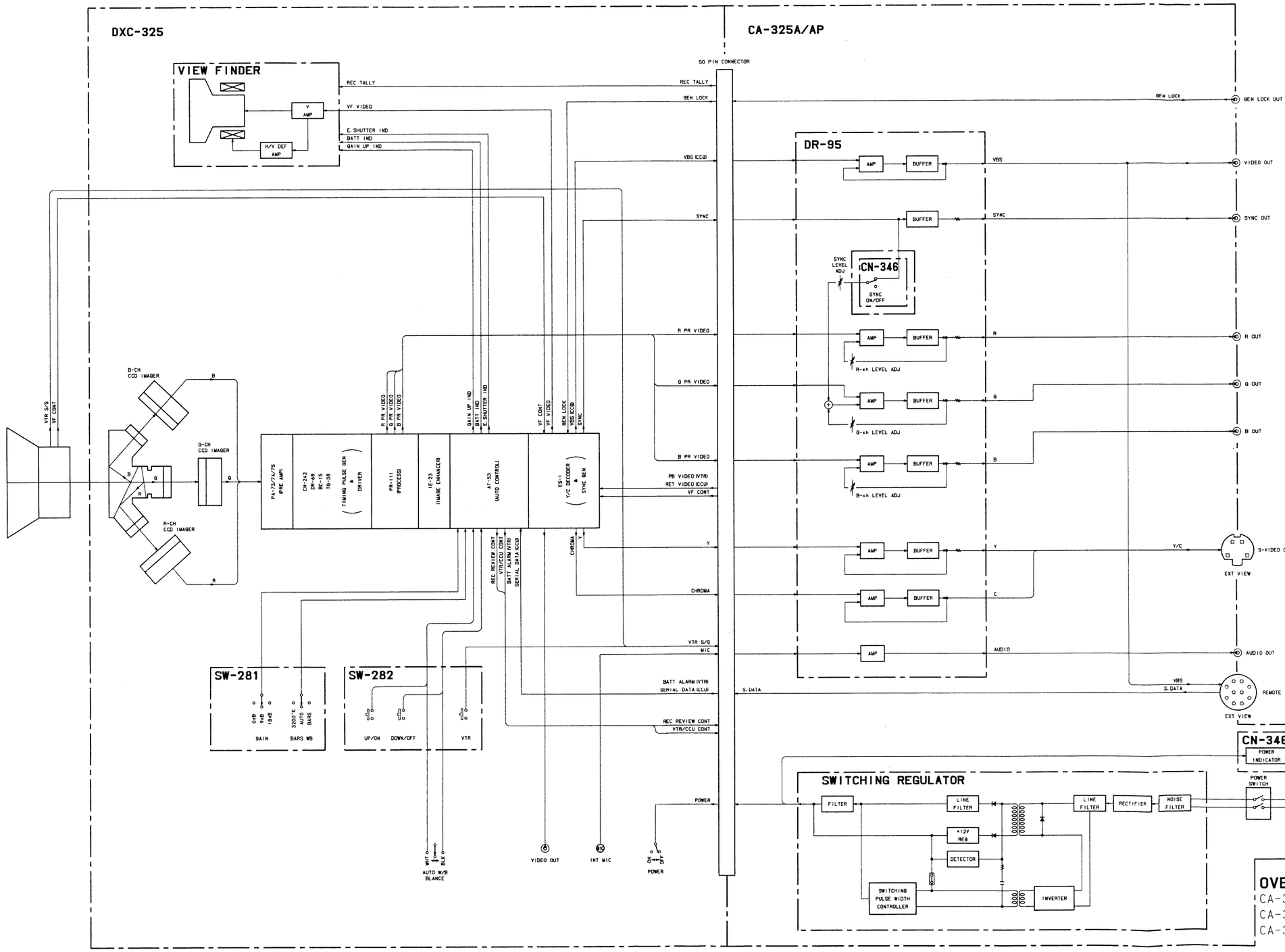
2. Measure the voltage at the following test points, using the digital volt-meter.
   Pin ① (or pin②) of CN201/CR-16 board
   Pin ③ (or Pin④) of CN201/CR-16 board

3. Adjust ◐RV201 on the CR-16 board so that a potential difference between pin① and ③ is 12 ± 0.1 Vdc.



SECTION A
BLOCK DIAGRAM

OVERALL BLOCK DIAGRAM



CA-325A (J, UC)
CA-325AP (EK)

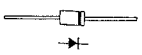
A-1 A-2

B-CA325A-OVERALL/BLOCK

SECTION B
SEMICONDUCTOR PIN ASSIGNMENTS

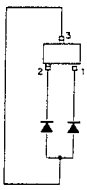
The circuit diagram of IC is obtained from the IC data book published by the manufacturer.

< DIODE >

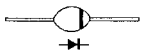


10E-2
1SS119

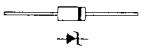
TOP VIEW (SCALE 4/1)



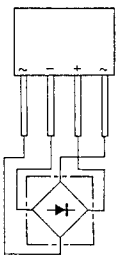
1S2835



F114D
F114F



HZ ? ?EB ?
RD ? ?ESB ?

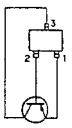


LB156

TLG144 ; GREEN

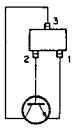
< TRANSISTOR >

TOP VIEW (SCALE 4/1)

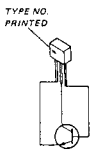


2SA1226
2SA812

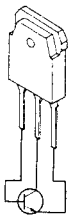
TOP VIEW (SCALE 4/1)



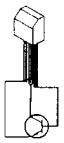
2SC1623
2SC2757



2SC2785



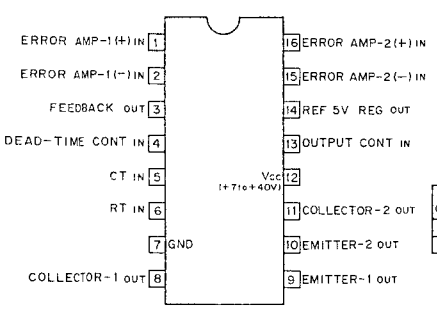
2SC3460

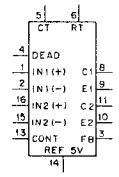


2SD774

< IC >

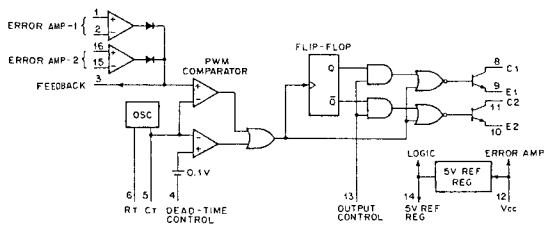
MB3759 (FUJITSU)
PWM POWER CONTROL
- TOP VIEW -



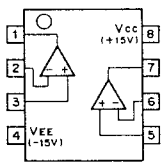


OUTPUT CONTROL	OUTPUT FUNCTION
0	PARALLEL
1	PUSH-PULL

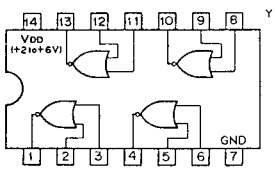
0 ; GROUNDED
1 ; CONNECTED TO PIN 14

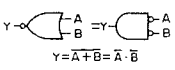


RC4560M (RAYTHEON) FLAT PACKAGE
OPERATIONAL AMPLIFIER
- TOP VIEW -



SN74HC02NS (TI) FLAT PACKAGE
C-MOS 2-INPUT POSITIVE-NOR GATE
- TOP VIEW -



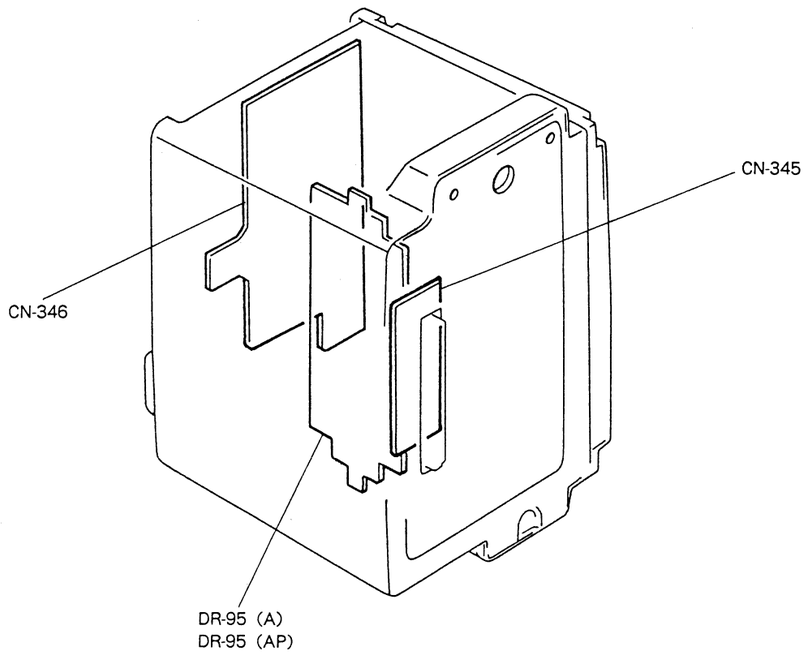


A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

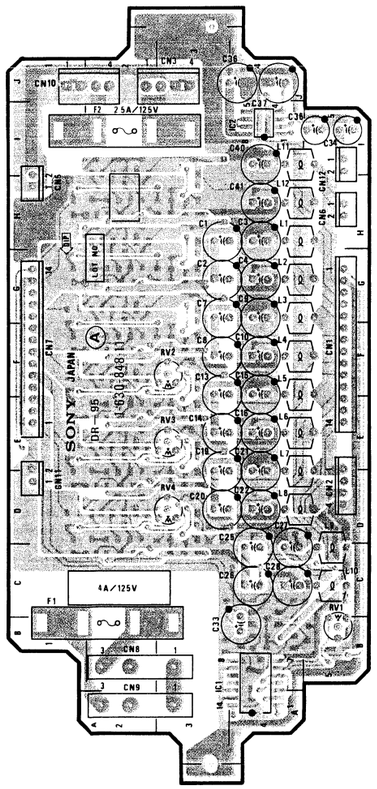
SECTION C
SCHEMATIC DIAGRAMS AND BORAD ILLUSTRATION

BOARD LAYOUT

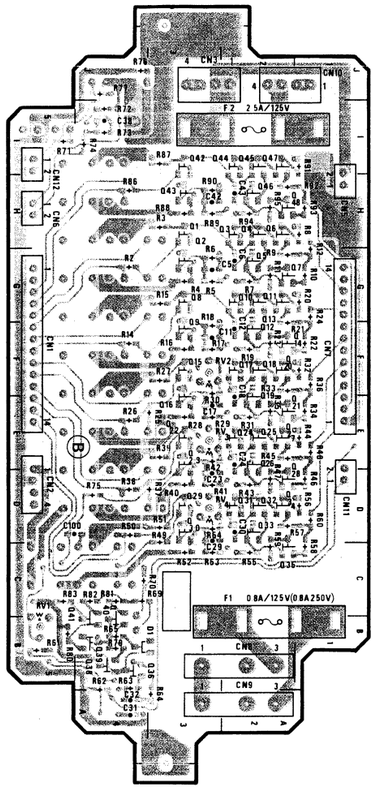


FRAME CN-345, CN-346, CR-16, DR-95

DR-95 BOARD



1-630-848-11 COMPONENT SIDE

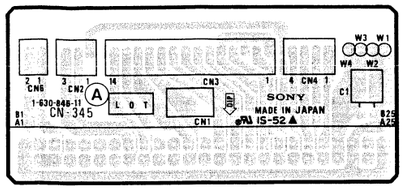


1-630-848-11 SOLDERING SIDE

DR-95 1-630-848-11

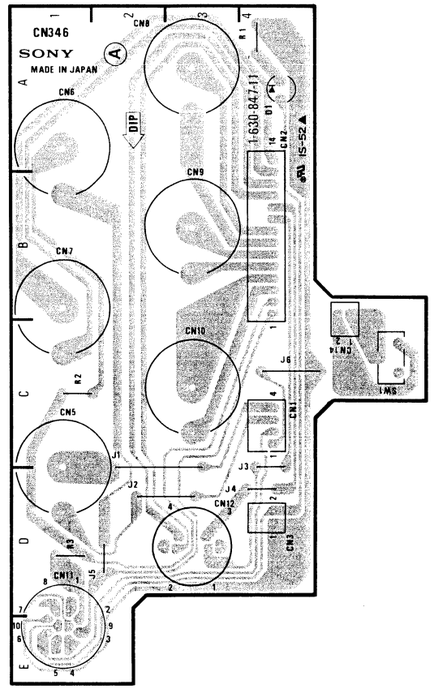
CN1	F-5	Q11	G-2
CN2	D-5	Q12	F-2
CN3	J-3	Q13	G-2
CN5	H-1	Q14	F-2
CN6	H-5	Q15	F-3
CN7	F-1	Q16	E-3
CN8	B-2	Q18	F-2
CN9	A-2	Q19	E-2
CN10	J-2	Q20	F-2
CN11	D-1	Q21	E-2
CN12	I-5	Q22	E-3
		Q23	E-3
D1	B-4	Q24	E-2
		Q25	E-2
F1	B2	Q26	E-2
F2	I-2	Q27	F-2
		Q28	D-2
IC1	B-4	Q29	D-3
IC2	I-4	Q30	D-3
		Q31	D-2
L1	H-4	Q32	D-2
L2	G-4	Q33	D-2
L3	G-4	Q34	D-2
L4	F-4	Q35	C-2
L5	F-4	Q36	B-4
L6	E-4	Q38	B-4
L8	D-4	Q39	B-4
L9	C-5	Q40	B-4
L10	C-5	Q41	B-4
L11	I-4	Q42	I-3
L12	H-4	Q43	H-3
		Q44	I-2
Q1	H-3	Q45	I-2
Q2	G-3	Q46	H-2
Q3	H-2	Q47	I-2
Q4	H-2	Q48	H-2
Q5	G-2		
Q6	H-2	RV1	B-5
Q7	G-2	RV2	F-3
Q8	G-3	RV3	E-3
Q9	F-3	RV4	D-3
Q10	G-2		

CN-345 BOARD



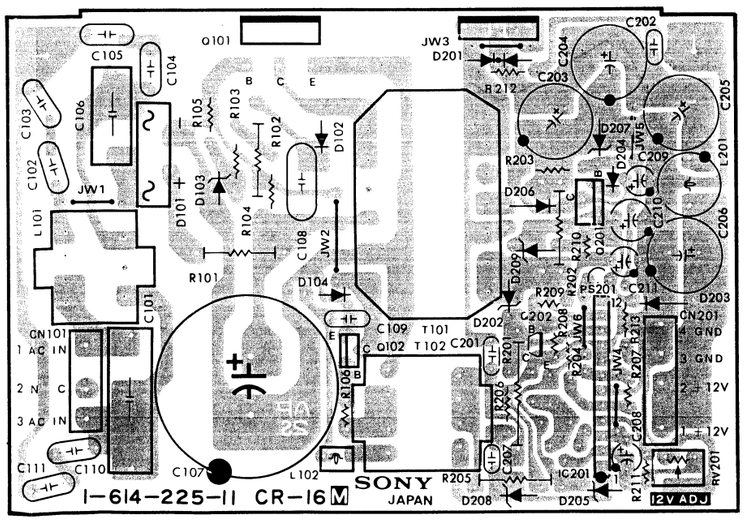
1-630-846-11 COMPONENT SIDE

CN-346 BOARD



1-630-847-11 COMPONENT SIDE

CR-16 BOARD



1-614-225-11 COMPONENT SIDE

FRAME
CN-345 BOARD
CN-346 BOARD
DR-95 BOARD

SONY CAMERA ADAPTOR
CA-325A/AP

CN-345 BOARD

CAMERA
DXC-325

Refer to CAMERA Service Manual

MB-190 BOARD

CN3		CN1	
GND (CHASSIS)	A1	A1	GND (CHASSIS)
GND (CHASSIS)	B1	B1	GND (CHASSIS)
MIC OUT (Y)	A2	A2	MIC IN (Y)
MIC OUT (X)	B2	B2	MIC IN (X)
MIC OUT (G)	A3	A3	MIC IN (G)
NC	B3	B3	NC
REC TALLY IN	A4	A4	REC TALLY OUT
NC	B4	B4	NC
VTR START/STOP OUT	A5	A5	VTR START/STOP IN
NC	B5	B5	NC
NC	A6	A6	NC
NC	B6	B6	NC
NC	A7	A7	NC
NC	B7	B7	NC
GEN LOCK VIDEO IN (G)	A8	A8	GEN LOCK VIDEO OUT (G)
GEN LOCK VIDEO IN (X)	B8	B8	GEN LOCK VIDEO OUT (X)
SYNC OUT (G)	A9	A9	SYNC IN (G)
SYNC OUT (X)	B9	B9	SYNC IN (X)
PB RET VIDEO IN (G)	A10	A10	PB RET VIDEO OUT (G)
PB RET VIDEO IN (X)	B10	B10	PB RET VIDEO OUT (X)
VF VIDEO CONT IN	A11	A11	VF VIDEO CONT OUT
PLAYBACK/CAMERA CONT PB 1/0 IN	B11	B11	PLAYBACK/CAMERA CONT PB 1/0 OUT
VBS (CCG) OUT (G)	A12	A12	VBS (CCG) IN (G)
VBS (CCG) OUT (X)	B12	B12	VBS (CCG) IN (X)
VTR SAVE OUT	A13	A13	VTR SAVE IN
VTR CCU CONT OUT	B13	B13	VTR CCU CONT IN
CHROMINANCE OUT (G)	A14	A14	CHROMINANCE IN (G)
CHROMINANCE OUT (X)	B14	B14	CHROMINANCE IN (X)
LUMINANCE OUT (G)	A15	A15	LUMINANCE IN (G)
LUMINANCE OUT (X)	B15	B15	LUMINANCE IN (X)
PR VIDEO GND OUT	A16	A16	PR VIDEO GND IN
R PR VIDEO OUT (X)	B16	B16	R PR VIDEO IN (X)
G PR VIDEO OUT (X)	A17	A17	G PR VIDEO IN (X)
B PR VIDEO OUT (X)	B17	B17	B PR VIDEO IN (X)
S.DATA IN	A18	A18	S.DATA OUT
REC REVIEW CONT OUT	B18	B18	REC REVIEW CONT IN
LINCS (X)	A19	A19	LINCS (X)
LINCS (G)	B19	B19	LINCS (G)
+8.5V OUT	A20	A20	+8.5V IN
+5.0V OUT	B20	B20	+5.0V IN
-5.0V OUT	A21	A21	-5.0V IN
GND	B21	B21	GND
UNREG (+12V) IN	A22	A22	UNREG (+12V) OUT
UNREG (+12V) IN	B22	B22	UNREG (+12V) OUT
UNREG (GND) IN	A23	A23	UNREG (GND) OUT
UNREG (GND) IN	B23	B23	UNREG (GND) OUT
NC	A24	A24	NC
NC	B24	B24	NC
GND (CHASSIS)	A25	A25	GND (CHASSIS)
GND (CHASSIS)	B25	B25	GND (CHASSIS)

C1 0.01

S.DATA IN (X) — CN2 1
GENLOCK VIDEO IN (X) — CN2 2
GENLOCK VIDEO IN (G) — CN2 3

CN3
SYNC OUT (X) 14
SYNC OUT (G) 13
VBS (CCG) OUT (X) 12
VBS (CCG) OUT (G) 11
CHROMINANCE OUT (X) 10
CHROMINANCE OUT (G) 9
LUMINANCE OUT (X) 8
LUMINANCE OUT (G) 7
R PR VIDEO OUT (X) 6
R PR VIDEO OUT (G) 5
B PR VIDEO OUT (X) 4
B PR VIDEO OUT (G) 3
G PR VIDEO OUT (X) 2
G PR VIDEO OUT (G) 1

CN4
+8.5V OUT 4
+5.0V OUT 3
-5.0V OUT 2
GND 1

CN-346 BOARD (2/2)

SW1 (SYNC ON GREEN): OFF / ON

G SYNC CTL OUT — CN14 1
GND — CN14 2

CN6
MIC OUT (X) 2
MIC OUT (G) 1

UNREG (+12V) IN — W4
UNREG (+12V) IN — W3
UNREG (GND) IN — W2
UNREG (GND) IN — W1

DR-95 BOARD

CN2 1 +8.5V IN
CN1 5 CHROMINANCE IN (X)
CN1 6 CHROMINANCE IN (G)
CN2 3 -5.0V IN
CN2 4 GND
CN1 7 LUMINANCE IN (X)
CN1 8 LUMINANCE IN (G)
CN2 2 +5.0V IN
CN11 1 G SYNC CTL IN
CN11 2 GND
CN1 1 SYNC IN (X)
CN1 2 SYNC IN (G)
CN1 3 VBS (CCG) IN (X)
CN1 4 VBS (CCG) IN (G)
CN1 9 R PR VIDEO IN (X)
CN1 10 R PR VIDEO IN (G)
CN1 11 G PR VIDEO IN (X)
CN1 12 G PR VIDEO IN (G)
CN1 13 B PR VIDEO IN (X)
CN1 14 B PR VIDEO IN (G)
CN12 1 MIC IN (X)
CN12 2 MIC IN (G)

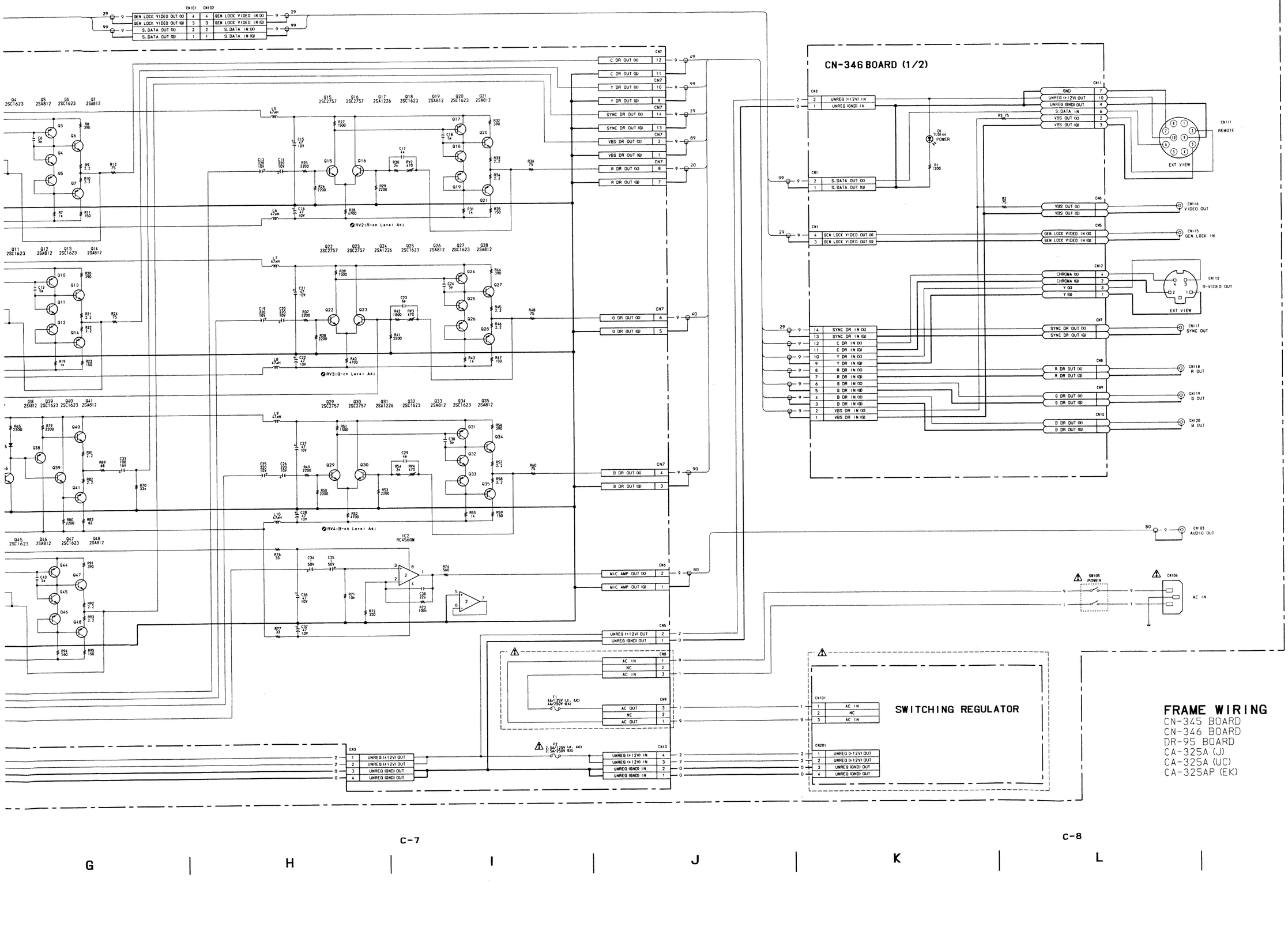
IC1 SN74HC02NS

RV1: SYNC LEVEL

CA-325A (J) (UC)
CA-325AP (EK)

C-5 C-6

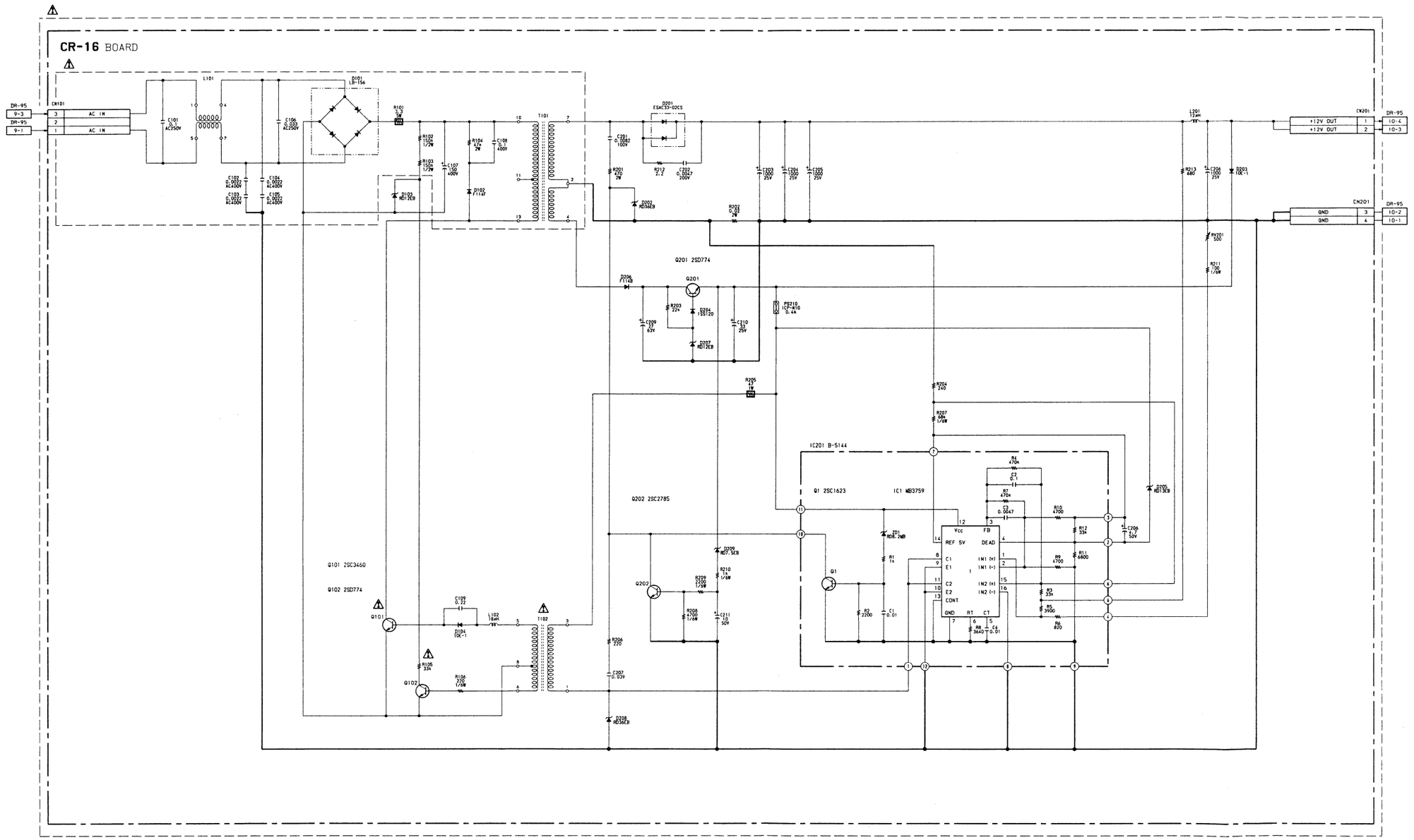
A | B | C | D | E | F | G



C-7 C-8

B-CA325A-FRAME/M

SWTICHING REGULATOR
CR-16 BOARD



SWTICHING REGULATOR
CR-16 BOARD
CA-325A (J)
CA-325A (UC)
CA-325AP (EK)

SECTION D
SPARE PARTS

D-1. PARTS INFORMATION

1. **Safety Related Component Warning**

   Components identified by shading marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony parts whose parts numbers appear as shown in this manual or in service manual supplements published by Sony.

2. Replace Parts that are supplied from Sony Parts Center can sometimes have different shape and external appearance than what are actually used in equipment. This is due to "**accommodating the improved parts and/or engineering changes**" or "**standardization of genuine parts.**"

   .This manual's exploded view and electrical spare parts lists are indicating the parts numbers of "the standardized genuine parts at present."

   .Regarding engineering parts and diagrams changes in our engineering department, refer to Sony service bulletins and service manual supplements.

3. **The parts marked with "S" in the SP column** of the exploded views and electical spare parts list are nomally required for routine service work. Orders for parts marked with "0" will be processed, but allow for additional delivery time.

4. Item with no parts number and/or no description are not stocked because they are seldom required for routine service.

5. **Abbreviation**

REF.No.	DESCRIPTION	REF.No.	DESCRIPTION	REF.No.	DESCRIPTION
BT	BATTERY	FL	FILTER	RV	VARIABLE RESISTOR
C	CAPACITOR	IC	IC	S	SWITCH
CN	CONNECTOR	L	INDUCTOR	T	TRANSFORMER
CP	COMBINATION PARTS	LV	VARIABLE INDUCTOR	TH	THERMISTOR
CV	VARIABLE CAPACITOR	Q	TRANSISTOR	X	OSCILLATOR
D	DIODE	R	RESISTOR		
DL	DELAY LINE	RB	RESISTOR BLOCK		

All capacitors are in micro farads unless otherwise specified.
All inductors are in micro henries unless otherwise specified.
All resistors are in ohms.

D-2. SCREW

+P
Czn-N

7-621-□□□-□□

SIZE	Parts No.
2 x 3	255-15
x 4	255-25
x 5	255-35
x 6	255-45
x 8	255-55
x 10	255-65
x 12	255-75
x 14	255-85
x 16	256-05
x 20	256-25
2.3 x 5	257-35
x 6	257-45
x 8	257-55
x 10	257-65
x 12	257-75
x 14	257-85
x 16	258-05
x 20	258-25
2.6 x 3	259-15
x 4	259-25
x 5	259-35
x 6	259-45
x 8	259-55
x 10	259-65
x 12	259-75
x 14	259-85
x 16	260-05
x 20	260-25

+B
Bzn-N

7-621-□□□-□□

SIZE	Parts No.
2 x 3	255-10
x 4	255-20
x 5	283-00
x 6	255-40
x 8	255-50
x 10	283-10
x 12	283-70
x 14	772-70
x 16	772-80
x 20	–
2.6 x 3	259-10
x 4	284-00
x 5	284-10
x 6	284-20
x 8	284-30
x 10	284-40
x 12	259-70
x 14	259-80
x 16	260-00
x 20	260-20

+B
Cr-N

7-682-□□□-□□

SIZE	Parts No.
3 x 3	144-01
x 4	145-01
x 5	146-01
x 6	147-01
x 8	148-01
x 10	149-01
x 12	150-01
x 14	151-01
x 16	152-01
x 20	153-01
4 x 4	158-01
x 5	159-01
x 6	160-01
x 8	161-01
x 10	162-01
x 12	163-01
x 14	164-01
x 16	165-01
x 20	166-01
5 x 8	174-01
x 10	175-01
x 12	176-01
x 14	177-01
x 16	178-01
x 20	179-01

+B
Bzn-N

7-682-□□□-□□

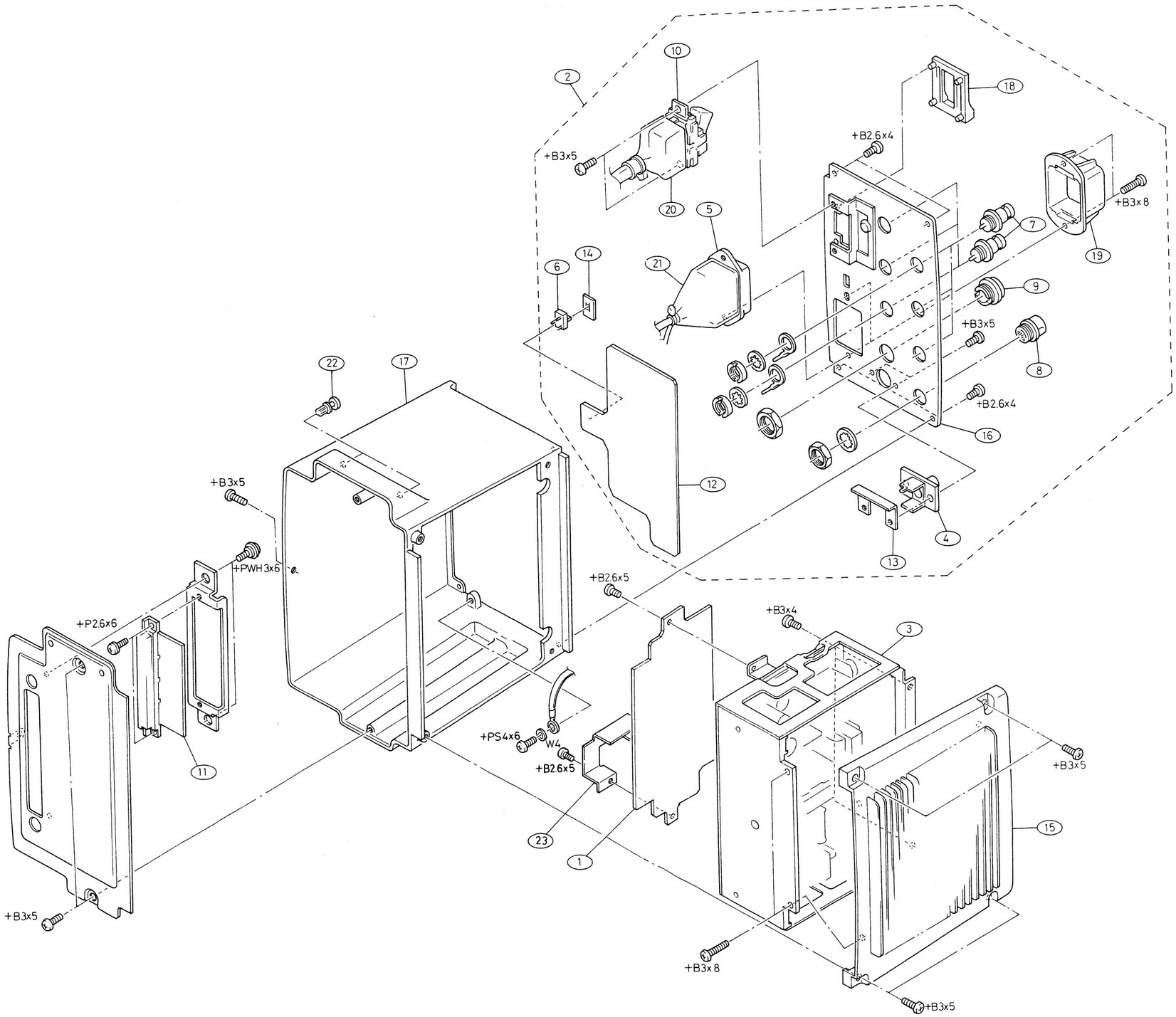
SIZE	Parts No.
3 x 3	544-09
x 4	545-09
x 5	546-09
x 6	547-09
x 8	548-09
x 10	549-09
x 12	550-09
x 14	551-09
x 16	552-09
x 20	553-09
x 30	555-09
4 x 4	558-09
x 5	559-09
x 6	560-09
x 8	561-09
x 10	562-09
x 12	563-09
x 14	564-09
x 16	565-09
x 20	566-09
5 x 8	574-09
x 10	575-09
x 12	576-09
x 14	577-09
x 16	578-09
x 20	579-09

+PWH

7-682-□□□-□□

SIZE	Parts No.
2.6 x 4	
x 5	902-11
x 6	902-21
x 8	902-31
x 10	
x 12	902-51
x 14	
3 x 5	903-01
x 6	903-11
x 8	903-21
x 10	903-31
x 12	903-41
x 14	
4 x 6	904-01
x 8	904-11
x 10	904-21
x 12	904-31
x 14	904-41
x 16	
x 20	

D-3.EXPLODED VIEW



Ref.No.	Parts No.	SP	Description

			FRAME

CN101	1-568-618-11	o	PLUG HOUSING 4P
	1-564-092-11	o	PLUG CONTACT, MALE
CN102	1-561-516-00	o	PLUG HOUSING 4P
	1-560-372-00	o	PLUG CONTACT, FEMALE
CN103	1-507-467-00	s	PIN JACK "AUDIO OUT"
CN106	⚠1-509-546-11	s	3P INLET
CN111	1-565-443-11	o	RECEPTACLE, 10P MALE "REMOTE"
CN112	1-568-699-11	s	RECEPTACLE, 4P MALE "S VIDEO OUT"
CN115	1-562-382-00	s	RECEPTACLE, BNC "GENLOCK"
CN116	1-562-382-00	s	RECEPTACLE, BNC "VIDEO OUT"
CN117	1-562-382-00	s	RECEPTACLE, BNC "SYNC OUT"
CN118	1-562-382-00	s	RECEPTACLE, BNC "R"
CN119	1-562-382-00	s	RECEPTACLE, BNC "G"
CN120	1-562-382-00	s	RECEPTACLE, BNC "B"
SW105	⚠1-570-743-21	s	SWITCH, AC POWER "POWER ON/OFF"

Ref.No.	Parts No.	SP	Description
	SWITCHING REGULATOR		
	⚠1-413-429-11	s	REGULATOR, SWITCHING (SOPS-1005)
C101	⚠1-136-212-12	s	FILM 0.1 20% 250V
C102	1-161-742-00	s	CERAMIC 2200PF 20% 400V
C103	1-161-742-00	s	CERAMIC 2200PF 20% 400V
C104	1-161-742-00	s	CERAMIC 2200PF 20% 400V
C105	1-161-742-00	s	CERAMIC 2200PF 20% 400V
C106	⚠1-136-297-11	s	FILM 0.033 20% 250V
C107	1-125-384-11	s	ELECT 150 20% 400V
C108	1-136-199-00	s	FILM 0.1 10% 400V
C109	1-130-781-00	s	FILM 0.22 10% 100V
C201	1-106-365-00	s	FILM 8200PF 10% 100V
C202	1-106-359-00	s	FILM 4700PF 10% 200V
C203	1-126-105-11	s	ELECT 1000 20% 35V
C204	1-126-105-11	s	ELECT 1000 20% 35V
C205	1-126-105-11	s	ELECT 1000 20% 35V
C206	1-126-105-11	s	ELECT 1000 20% 35V
C207	1-136-160-00	s	FILM 0.039 10% 50V
C208	1-124-045-00	s	ELECT 4.7 20% 50V
C209	1-124-773-11	s	ELECT 27 20% 63V
C210	1-124-357-11	s	ELECT 33 20% 35V
C211	1-123-875-11	s	ELECT 10 20% 50V
CN101	⚠1-508-765-00	o	RECEPTACLE, 3P MALE
	1-561-218-00	o	PLUG HOUSING, 3P
	1-561-432-00	o	PLUG CONTACT
CN201	1-508-766-00	o	RECEPTACLE, 4P MALE
	1-561-427-00	o	PLUG HOUSING, 4P
	1-561-432-00	o	PLUG CONTACT
D101	⚠ 8-719-300-63	s	LB-156
D102	8-719-104-07	s	F114F
D103	8-719-110-31	s	RD12ESB2
D104	8-719-200-02	s	10E-2
D201	8-719-902-43	s	ESAD33-02CS
D202	8-719-110-83	s	RD36ESB2
D203	8-719-200-02	s	10E-2
D204	8-719-911-19	s	1SS119
D205	8-719-110-36	s	RD13ESB2
D206	8-719-111-44	s	F114D
D207	8-719-110-31	s	RD12ESB2
D208	8-719-110-83	s	RD36ESB2
D209	8-719-110-03	s	RD7.5ESB2
L101	⚠1-421-400-11	s	LINE FILTER
L102	1-421-473-11	s	18
L201	⚠1-421-370-00	s	CHOKE
PS201	1-532-605-11	s	IC LINK 0.4A
Q101	⚠8-729-802-14	s	2SC3460
Q102	8-729-177-42	s	2SD774-3
Q201	8-729-177-42	s	2SD774-3
Q202	8-729-119-78	s	2SC2785-HFE
R101	⚠1-207-673-00	s	WIREWOUND 3.3 10% 5W
R102	1-214-917-00	s	CARBON 150K 5% 1/2W
R103	1-214-917-00	s	CARBON 150K 5% 1/2W
R104	1-215-902-11	s	METAL 47K 5% 2W
R105	1-247-726-11	s	CARBON 33K 5% 1/4W
R106	1-249-409-11	s	CARBON 220 5% 1/4W
R201	1-215-890-11	s	METAL 470 5% 2W
R202	1-535-369-00	s	SHUNT 0.02 5% 2W
R203	1-249-462-11	s	CARBON 22K 5% 1/4W
R204	1-247-116-00	s	CARBON 240 5% 1/4W
R205	1-215-861-11	s	METAL 47 5% 1W
R206	1-247-704-11	s	CARBON 220 5% 1/4W
R207	1-249-439-11	s	CARBON 68K 5% 1/4W
R208	1-249-425-11	s	CARBON 4.7K 5% 1/4W
R209	1-249-421-11	s	CARBON 2.2K 5% 1/4W
R210	1-249-417-11	s	CARBON 1K 5% 1/4W
R211	1-249-405-11	s	CARBON 100 5% 1/4W
R212	1-249-451-11	s	CARBON 2.2 5% 1/4W
R213	1-247-711-11	s	CARBON 680 5% 1/4W
RV201	1-228-141-00	s	METAL 500
T101	⚠1-448-030-11	s	CONVERTER
T102	1-437-169-11	s	DRIVE

Ref.No.	Parts No.	SP	Description
Q16	8-729-175-73	s	2SC2757
Q17	8-729-122-63	s	2SA1226
Q18	8-729-100-66	s	2SC1623
Q19	8-729-216-22	s	2SA1162
Q20	8-729-100-66	s	2SC1623
Q21	8-729-216-22	s	2SA1162
Q22	8-729-175-73	s	2SC2757
Q23	8-729-175-73	s	2SC2757
Q24	8-729-122-63	s	2SA1226
Q25	8-729-100-66	s	2SC1623
Q26	8-729-216-22	s	2SA1162
Q27	8-729-100-66	s	2SC1623
Q28	8-729-216-22	s	2SA1162
Q29	8-729-175-73	s	2SC2757
Q30	8-729-175-73	s	2SC2757
Q31	8-729-122-63	s	2SA1226
Q32	8-729-100-66	s	2SC1623
Q33	8-729-216-22	s	2SA1162
Q34	8-729-100-66	s	2SC1623
Q35	8-729-216-22	s	2SA1162
Q36	8-729-175-73	s	2SC2757
Q38	8-729-216-22	s	2SA1162
Q39	8-729-100-66	s	2SC1623
Q40	8-729-100-66	s	2SC1623
Q41	8-729-216-22	s	2SA1162
Q42	8-729-175-73	s	2SC2757
Q43	8-729-175-73	s	2SC2757
Q44	8-729-122-63	s	2SA1226
Q45	8-729-100-66	s	2SC1623
Q46	8-729-216-22	s	2SA1162
Q47	8-729-100-66	s	2SC1623
Q48	8-729-216-22	s	2SA1162

Ref.No.	Parts No.	SP	Description
R5	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R6	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R12	1-216-022-00	s	METAL 75 5% 1/10W
R17	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R18	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R24	1-216-022-00	s	METAL 75 5% 1/10W
R25	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R26	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R29	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R30	1-216-658-11	s	METAL CHIP 2K 0.5% 1/10W
R36	1-216-022-00	s	METAL 75 5% 1/10W
R37	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R38	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R41	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R42	1-216-657-11	s	METAL CHIP 1.8K 0.5% 1/10W
R48	1-216-022-00	s	METAL 75 5% 1/10W
R49	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R50	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R53	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R54	1-216-658-11	s	METAL CHIP 2K 0.5% 1/10W
R60	1-216-022-00	s	METAL 75 5% 1/10W
R86	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R89	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
R90	1-216-659-11	s	METAL CHIP 2.2K 0.5% 1/10W
RV1	1-230-522-11	s	METAL 4.7K
RV2	1-230-519-11	s	METAL 470
RV3	1-230-519-11	s	METAL 470
RV4	1-230-519-11	s	METAL 470

Ref.No.	Parts No.	SP	Description
C31	1-163-038-00	s	CERAMIC CHIP 0.1 25V
C32	1-163-101-00	s	CERAMIC CHIP 22PF 5% 50V
C33	1-126-101-11	s	ELECT 100 20% 16V
C34	1-126-160-11	s	ELECT 1 20% 50V
C35	1-126-160-11	s	ELECT 1 20% 50V
C36	1-124-589-11	s	ELECT 47 20% 10V
C37	1-124-589-11	s	ELECT 47 20% 10V
C38	1-163-101-00	s	CERAMIC CHIP 22PF 5% 50V
C40	1-124-589-11	s	ELECT 47 20% 10V
C41	1-124-589-11	s	ELECT 47 20% 10V
C42	1-163-087-00	s	CERAMIC CHIP 4PF ±0.25PF 50V
C43	1-163-088-00	s	CERAMIC CHIP 5PF ±0.25PF 50V
C100	1-163-093-00	s	CERAMIC CHIP 10PF ±0.25PF 50V
CN1	1-564-069-31	o	RECEPTACLE, 14P MALE
	1-562-185-31	o	PLUG HOUSING 14P
	1-564-026-00	o	PLUG CONTACT
CN2	1-506-469-11	o	RECEPTACLE, 4P MALE
	1-562-149-11	o	PLUG HOUSING 4P
	1-564-026-00	o	PLUG CONTACT
CN3	1-506-703-11	o	RECEPTACLE, 4P MALE
	1-561-516-00	o	PLUG HOUSING 4P
	1-560-372-00	o	PLUG CONTACT
CN5	1-506-467-11	o	RECEPTACLE, 2P MALE
	1-562-147-11	o	PLUG HOUSING 2P
	1-564-026-00	o	PLUG CONTACT
CN6	1-506-467-11	o	RECEPTACLE, 2P MALE
	1-562-147-11	o	PLUG HOUSING 2P
	1-564-026-00	o	PLUG CONTACT
CN7	1-506-479-11	o	RECEPTACLE, 14P MALE
	1-562-185-31	o	PLUG HOUSING 14P
	1-564-026-00	o	PLUG CONTACT
CN8 ⚠	1-560-033-00	s	RECEPTACLE, 3P MALE
	1-561-218-00	s	PLUG HOUSING 3P
	1-561-432-00	s	PLUG CONTACT
CN9 ⚠	1-560-033-00	s	RECEPTACLE, 3P MALE
	1-561-218-00	s	PLUG HOUSING 3P
	1-561-432-00	s	PLUG CONTACT
CN10	1-506-703-11	o	RECEPTACLE, 4P MALE
	1-561-516-00	o	PLUG HOUSING 4P
	1-560-372-00	o	PLUG CONTACT
CN11	1-506-467-11	o	RECEPTACLE, 2P MALE
	1-562-147-11	o	PLUG HOUSING 2P
	1-564-026-00	o	PLUG CONTACT
CN12	1-506-467-11	o	RECEPTACLE, 2P MALE
	1-562-147-11	o	PLUG HOUSING 2P
	1-564-026-00	o	PLUG CONTACT

Ref.No.	Parts No.	SP	Description
D1	8-719-100-03	s	1S2835
F1 ⚠	1-532-703-00	s	125V 4A (UC)
	1-532-350-00	s	TIME-LAG 250V 4A (EK)
	1-533-189-11	o	HOLDER, FUSE
F2 ⚠	1-532-701-11	s	125V 2.5A (UC)
	1-532-286-00	s	TIME-LAG 250V 2.5A (EK)
	1-533-189-11	o	HOLDER, FUSE
IC1	8-759-925-72	s	SN74HC02NS: TI
IC2	8-759-745-64	s	NJM4560M: JRC
L1	1-408-417-00	s	47
L2	1-408-417-00	s	47
L3	1-408-417-00	s	47
L4	1-408-417-00	s	47
L5	1-408-417-00	s	47
L6	1-408-417-00	s	47
L7	1-408-417-00	s	47
L8	1-408-417-00	s	47
L9	1-408-417-00	s	47
L10	1-408-417-00	s	47
L11	1-408-417-00	s	47
L12	1-408-417-00	s	47
Q1	8-729-175-73	s	2SC2757
Q2	8-729-175-73	s	2SC2757
Q3	8-729-122-63	s	2SA1226
Q4	8-729-100-66	s	2SC1623
Q5	8-729-216-22	s	2SA1162
Q6	8-729-100-66	s	2SC1623
Q7	8-729-216-22	s	2SA1162
Q8	8-729-175-73	s	2SC2757
Q9	8-729-175-73	s	2SC2757
Q10	8-729-122-63	s	2SA1226
Q11	8-729-100-66	s	2SC1623
Q12	8-729-216-22	s	2SA1162
Q13	8-729-100-66	s	2SC1623
Q14	8-729-216-22	s	2SA1162
Q15	8-729-175-73	s	2SC2757

Ref.No.	Parts No.	SP	Description
CN-345 BOARD			
	1-630-846-11	o	PRINTED CIRCUIT BOARD "CN-345"
C1	1-161-051-00	o	CERAMIC 0.01 10% 50V
CN1	1-566-581-11	o	RECEPTACLE, 50P FEMALE
CN-346 BOARD			
	1-630-847-11	o	PRINTED CIRCUIT BOARD "CN-346"
D1	8-719-800-46	o	TLG144
R1	1-249-418-11	s	CARBON 1.2K 5% 1/4W
R2	1-247-804-11	s	CARBON 75 5% 1/4W
R3	1-247-804-11	s	CARBON 75 5% 1/4W
SW1	1-553-977-00	s	SLIDE "SYNC ON GREEN ON/OFF"

Ref.No.	Parts No.	SP	Description
DR-95 (A)/(AP) BOARD			
	A-7513-964-A	o	MOUNTED CIRCUIT BOARD "DR-95 (A)" (UC)
	A-7513-965-A	o	MOUNTED CIRCUIT BOARD "DR-95 (AP)" (EK)
C1	1-126-176-11	s	ELECT 220 20% 10V
C2	1-126-176-11	s	ELECT 220 20% 10V
C3	1-124-589-11	s	ELECT 47 20% 10V
C4	1-124-589-11	s	ELECT 47 20% 10V
C5	1-163-087-00	s	CERAMIC CHIP 4PF ±0.25PF 50V
C6	1-163-088-00	s	CERAMIC CHIP 5PF ±0.25PF 50V
C7	1-126-176-11	s	ELECT 220 20% 10V
C8	1-126-176-11	s	ELECT 220 20% 10V
C9	1-124-589-11	s	ELECT 47 20% 10V
C10	1-124-589-11	s	ELECT 47 20% 10V
C11	1-163-087-00	s	CERAMIC CHIP 4PF ±0.25PF 50V
C12	1-163-088-00	s	CERAMIC CHIP 5PF ±0.25PF 50V
C13	1-126-176-11	s	ELECT 220 20% 10V
C14	1-126-176-11	s	ELECT 220 20% 10V
C15	1-124-589-11	s	ELECT 47 20% 10V
C16	1-124-589-11	s	ELECT 47 20% 10V
C17	1-163-087-00	s	CERAMIC CHIP 4PF ±0.25PF 50V
C18	1-163-088-00	s	CERAMIC CHIP 5PF ±0.25PF 50V
C19	1-126-176-11	s	ELECT 220 20% 10V
C20	1-126-176-11	s	ELECT 220 20% 10V
C21	1-124-589-11	s	ELECT 47 20% 10V
C22	1-124-589-11	s	ELECT 47 20% 10V
C23	1-163-089-00	s	CERAMIC CHIP 6PF ±0.25PF 50V
C24	1-163-088-00	s	CERAMIC CHIP 5PF ±0.25PF 50V
C25	1-126-176-11	s	ELECT 220 20% 10V
C26	1-126-176-11	s	ELECT 220 20% 10V
C27	1-124-589-11	s	ELECT 47 20% 10V
C28	1-124-589-11	s	ELECT 47 20% 10V
C29	1-163-087-00	s	CERAMIC CHIP 4PF ±0.25PF 50V
C30	1-163-088-00	s	CERAMIC CHIP 5PF ±0.25PF 50V

D-5. ELECTRICAL PARTS

RESISTOR, CHIP

1/10W
0 - 3.3M (E12) ±5% 1/10W

Part No.	SP	Description			
1-216-295-00	s	RES, CHIP	0	5%	1/10W
1-216-298-00	s	RES, CHIP	2.2	5%	1/10W
1-216-302-00	s	RES, CHIP	2.7	5%	1/10W
1-216-304-00	s	RES, CHIP	3.3	5%	1/10W
1-216-306-00	s	RES, CHIP	3.9	5%	1/10W
1-216-308-00	s	RES, CHIP	4.7	5%	1/10W
1-216-309-00	s	RES, CHIP	5.6	5%	1/10W
1-216-311-00	s	RES, CHIP	6.8	5%	1/10W
1-216-313-00	s	RES, CHIP	8.2	5%	1/10W
1-216-001-00	s	RES, CHIP	10	5%	1/10W
1-216-003-00	s	RES, CHIP	12	5%	1/10W
1-216-005-00	s	RES, CHIP	15	5%	1/10W
1-216-007-00	s	RES, CHIP	18	5%	1/10W
1-216-009-00	s	RES, CHIP	22	5%	1/10W
1-216-011-00	s	RES, CHIP	27	5%	1/10W
1-216-013-00	s	RES, CHIP	33	5%	1/10W
1-216-015-00	s	RES, CHIP	39	5%	1/10W
1-216-017-00	s	RES, CHIP	47	5%	1/10W
1-216-019-00	s	RES, CHIP	56	5%	1/10W
1-216-021-00	s	RES, CHIP	68	5%	1/10W
1-216-023-00	s	RES, CHIP	82	5%	1/10W
1-216-025-00	s	RES, CHIP	100	5%	1/10W
1-216-027-00	s	RES, CHIP	120	5%	1/10W
1-216-029-00	s	RES, CHIP	150	5%	1/10W
1-216-031-00	s	RES, CHIP	180	5%	1/10W
1-216-033-00	s	RES, CHIP	220	5%	1/10W
1-216-035-00	s	RES, CHIP	270	5%	1/10W
1-216-037-00	s	RES, CHIP	330	5%	1/10W
1-216-039-00	s	RES, CHIP	390	5%	1/10W
1-216-041-00	s	RES, CHIP	470	5%	1/10W
1-216-043-00	s	RES, CHIP	560	5%	1/10W
1-216-045-00	s	RES, CHIP	680	5%	1/10W
1-216-047-00	s	RES, CHIP	820	5%	1/10W
1-216-049-00	s	RES, CHIP	1k	5%	1/10W
1-216-051-00	s	RES, CHIP	1.2k	5%	1/10W
1-216-053-00	s	RES, CHIP	1.5k	5%	1/10W
1-216-055-00	s	RES, CHIP	1.8k	5%	1/10W
1-216-057-00	s	RES, CHIP	2.2k	5%	1/10W
1-216-059-00	s	RES, CHIP	2.7k	5%	1/10W
1-216-061-00	s	RES, CHIP	3.3k	5%	1/10W
1-216-063-00	s	RES, CHIP	3.9k	5%	1/10W
1-216-065-00	s	RES, CHIP	4.7k	5%	1/10W
1-216-067-00	s	RES, CHIP	5.6k	5%	1/10W
1-216-069-00	s	RES, CHIP	6.8k	5%	1/10W
1-216-071-00	s	RES, CHIP	8.2k	5%	1/10W
1-216-073-00	s	RES, CHIP	10k	5%	1/10W
1-216-075-00	s	RES, CHIP	12k	5%	1/10W
1-216-077-00	s	RES, CHIP	15k	5%	1/10W
1-216-079-00	s	RES, CHIP	18k	5%	1/10W
1-216-081-00	s	RES, CHIP	22k	5%	1/10W
1-216-083-00	s	RES, CHIP	27k	5%	1/10W
1-216-085-00	s	RES, CHIP	33k	5%	1/10W
1-216-087-00	s	RES, CHIP	39k	5%	1/10W
1-216-089-00	s	RES, CHIP	47k	5%	1/10W
1-216-091-00	s	RES, CHIP	56k	5%	1/10W
1-216-093-00	s	RES, CHIP	68k	5%	1/10W
1-216-095-00	s	RES, CHIP	82k	5%	1/10W
1-216-097-00	s	RES, CHIP	100k	5%	1/10W
1-216-099-00	s	RES, CHIP	120k	5%	1/10W
1-216-101-00	s	RES, CHIP	150k	5%	1/10W
1-216-103-00	s	RES, CHIP	180k	5%	1/10W
1-216-105-00	s	RES, CHIP	220k	5%	1/10W
1-216-107-00	s	RES, CHIP	270k	5%	1/10W
1-216-109-00	s	RES, CHIP	330k	5%	1/10W
1-216-111-00	s	RES, CHIP	390k	5%	1/10W
1-216-113-00	s	RES, CHIP	470k	5%	1/10W
1-216-115-00	s	RES, CHIP	560k	5%	1/10W
1-216-117-00	s	RES, CHIP	680k	5%	1/10W
1-216-119-00	s	RES, CHIP	820k	5%	1/10W
1-216-121-00	s	RES, CHIP	1.0M	5%	1/10W
1-216-123-00	s	RES, CHIP	1.2M	5%	1/10W
1-216-125-00	s	RES, CHIP	1.5M	5%	1/10W
1-216-127-00	s	RES, CHIP	1.8M	5%	1/10W
1-216-129-00	s	RES, CHIP	2.2M	5%	1/10W
1-216-131-00	s	RES, CHIP	2.7M	5%	1/10W
1-216-133-00	s	RES, CHIP	3.3M	5%	1/10W

D-4. PACKING MATERIAL AND ACCESSORIES

Ref.No.	Part No.	SP	Description
⚠1	1-551-812-00	s	CORD, POWER (UC)
1	1-556-760-11	s	CORD, POWER (3 CORE) (EK)
	2-132-295-01	o	SPACER
	2-132-296-01	o	CUSHION (A)
	2-132-297-01	o	CUSHION (B)
	2-132-298-01	o	INDIVIDUAL CARTON (UC)
	2-132-901-01	o	INDIVIDUAL CARTON (EK)
	2-990-242-01	o	HOLDER (B), PLUG
	3-750-321-11	s	MANUAL, INSTRUCTION

No.	Parts No.	SP	Description
1	A-7513-964-A	o	MOUNTED CIRCUIT BOARD "DR-95(A)" (UC)
	A-7513-965-A	o	MOUNTED CIRCUIT BOARD "DR-95(AP)" (EK)
2	A-7603-121-A	o	PLATE ASSY, CN
3	⚠1-413-429-11	s	REGULATOR, SWITCHING (SOPS-1005)
4	1-507-467-00	s	PIN JACK "AUDIO OUT"
5	⚠1-509-546-11	s	3P INLET
6	1-553-977-00	s	SWITCH, SLIDE "SYNC ON GREEN ON/OFF"
7	1-562-382-00	s	RECEPTACLE, BNC "SYNC OUT" "R" "G" "B" "VIDEO OUT" "GENLOCK"
8	1-565-443-11	o	RECEPTACLE, 10P MALE "REMOTE"
9	1-568-699-11	s	RECEPTACLE, 4P MALE "S VIDEO OUT"
10	⚠1-570-743-21	s	SWITCH, AC POWER "POWER ON/OFF"
11	1-630-846-11	o	PRINTED CIRCUIT BOARD "CN-345"
12	1-630-847-11	o	PRINTED CIRCUIT BOARD "CN-346"
13	2-132-262-01	o	NUT, PLATE
14	2-132-263-01	o	PLATE, BLIND
15	2-132-266-02	s	PLATE, SIDE
16	2-132-267-02	o	PLATE, CN
17	2-132-268-01	s	CABINET
18	2-251-642-01	o	GUARD, POWER SWITCH
19	2-990-241-01	o	HOLDER (A), PLUG
20	4-025-191-01	o	COVER, INSULATING, SWITCH
21	4-601-466-11	s	COVER, 3P INLET
22	4-812-134-11	s	RIVET, NYLON, 3.5
23	2-138-904-01	o	PLATE, INSULATING